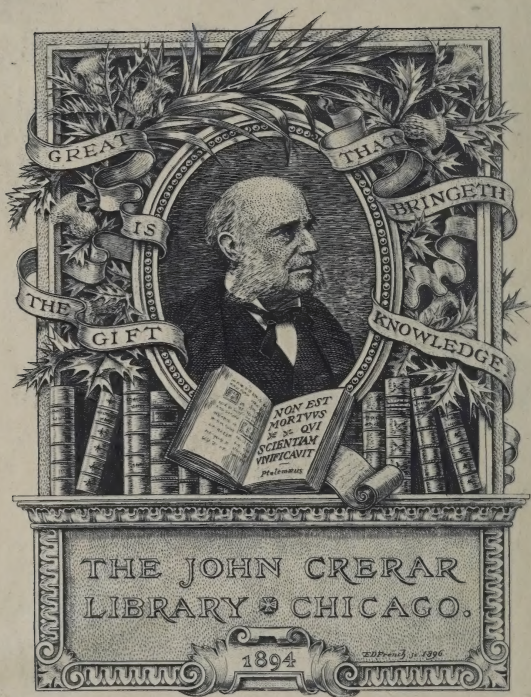


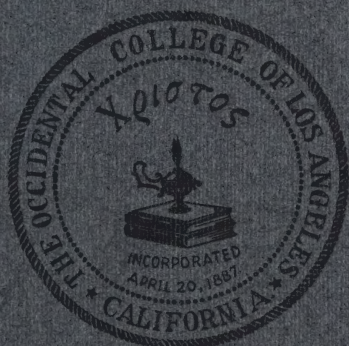


Occidental College Bulletin

NUMBER 26

JUNE 1913

CATALOGUE NUMBER



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Los Angeles, California

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CATALOGUE OF
OCCIDENTAL
COLLEGE

1912-1913

ANNOUNCEMENTS
for 1913 -- 1914

LOS ANGELES, CALIFORNIA

49 9

Calendar

1913

On the Old Campus

Sept. 22-23, Monday-Tuesday

Examinations for Admission and for
Removal of Conditions. Registration
of Students.

Sept. 24, Wednesday, 11:15 a. m.

First Semester Begins.

Oct. 14-15, Tuesday-Wednesday

Rhodes Scholarship Qualifying Examinations for Southern California, held at Occidental.

Nov. 27, Thursday

Thanksgiving Day.

Dec. 19, Friday, 4 p.m.

Christmas Vacation Begins.

1914

On the New Campus

Jan. 5, Monday, 8:30 a.m.

Christmas Vacation Ends.

Feb. 2-6, Monday-Friday

Mid-Year Examinations.

Feb. 6, Friday, 4 p. m.

First Semester Ends

378.734
O H 1

Withdrawn
170672

Feb. 9, Monday

Registration of New Students.

Feb. 9, Monday, 11:15 a.m.

Second Semester Begins.

Mar. 27, Friday, 4 p. m.

Spring Vacation Begins.

April 6, Monday, 8:30 a.m.

Spring Vacation Ends.

June 7, Sunday, 4 p. m.

Vesper Service of the College Christian
Associations.

June 8-12, Monday-Friday

Final Examinations.

June 14, Sunday, 4 p.m.

Baccalaureate Sermon.

June 16, Tuesday

Senior Class Day.

June 17, Wednesday, 10:30 a.m.

Twenty-second Annual Commencement.

Board of Trustees

Term expiring January 31, 1914:

Wm. H. Kelso,
Giles Kellogg,
* W. C. Patterson,
Hon. Robert Watchorn.

Term expiring January 31, 1915:

S. S. Salisbury, M.D.,
Rev. Wm. S. Young, D.D.,
E. P. Clapp, M.D.,
Willis H. Booth.

Term expiring January 31, 1916:

W. E. McVay,
D. B. Gamble,
John Willis Baer, LL.D.,
†Webster Merrifield, Ph.D., LL.D.

Term expiring January 31, 1917:

Hon. Frank P. Flint,
Edward H. Groenendyke,
Rev. Robert Freeman, D.D.,
M. Cochrane Armour.

Term expiring January 31, 1918:

John G. Bullock,
Henry S. Boice,
Arthur H. Fleming,
Fred H. Schauer, Esq.

*Deceased May 1, 1913.

†Resigned.

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McVay, Patterson.

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Schauer.

* Deceased May 1, 1913.

*Faculty and Instructors

1913-1914

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President

THOMAS G. BURT, Ph.D.,

Dean of the Faculty: Professor of Philosophy.

WILLIAM S. STEVENSON, LL.D.,

Professor of Sociology.

ERNEST E. ALLEN, M.A.,

Professor of Mathematics and Astronomy.

MARY CARRUTH CUNNINGHAM, M.A.

Professor of History: Assistant Professor of English.

† WILLIAM D. WARD, Ph.D.,

Rutan Professor of Classical Languages.

†

Professor of English.

CALVIN O. ESTERLY, Ph.D.,

Professor of Biology.

GEORGE F. COOK, Ph.D.,

Librarian: Professor of Education.

WILLIAM BELL, M.A.,

Professor of French and Spanish.

ELBERT E. CHANDLER, Ph.D.,

Professor of Chemistry.

*In order of appointment, excepting the President and the Dean.

†Head of Department to be appointed in 1914.

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Instructor in Mechanical Drawing.

JOHN PRICE ODELL, M.A.,
Professor of English.

HOWARD W. KELLOGG, M.A.,
Professor of Biblical Literature.

FRANK E. MOLL, M.A., S.T.B.,
Acting Professor of German.

ARTHUR G. PAUL, A.B.,
Registrar: Assistant Professor of English.

JOSEPH A. PIPAL,
Physical Director.

ROBERT GLASS CLELAND, Ph.D.,
Associate Professor of History and Economics.

MRS. JOSEPH A. PIPAL,
Physical Director for Women.

CLYDE L. E. WOLFE, M.A.,
Acting Professor of Physics.

JULIUS W. EGGLESTON, M.A.,
Professor of Geology and Botany.

CARY T. WRIGHT, M.S.,
Professor of Economics.

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Field Secretary.

MURIEL JOY SMITH,
Secretary to the President.

STANDING COMMITTEES OF THE FACULTY

President's Council—Dean Burt, Professor Stevenson, Professor Allen, Professor Cunningham, Professor Ward, Professor Esterly, Professor Bell.

Admission, Classification and Schedule—Professor Ward, Dean Burt, Professor Allen, Professor Paul.

Athletics—Professor Chandler, Professor Esterly, Professor Bell, Director Pipal.

Catalogue and Curriculum—Professor Ward, Professor Stevenson, Professor Allen, Professor Esterly, Professor Bell, Dean Burt.

Christian Work—Professor Kellogg, Professor Cunningham, Professor Cleland, Mr. Westcott.

Grounds and Buildings—Professor Bell, Professor Odell, Professor Moll.

Laboratories—Professor Esterly, Professor Chandler, Professor Wolfe.

Library—Professor Cook, Dean Burt, Professor Kellogg, Professor Esterly, Professor Cunningham.

Rules and Discipline—Dean Burt, Professor Cleland, Professor Cook, Professor Ward, Professor Cunningham, Professor Paul.

Social Life—Professor Cunningham, Dean Burt, Mrs. Pipal.

Events of the Year

1912

- June 9** Baccalaureate Sermon, Prof. William S. Stevenson, LL.D., Occidental College.
- June 9** Vesper Service of the College Christian Associations.
- June 10** Senior Play.
- June 11** Senior Class Day.
- June 11** President's Reception to the Seniors.
- June 12** Twentieth Annual Commencement.
- June 12** Alumni Banquet.
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- Sept. 18** Opening of the College Year. Addresses: Rev. Clarence A. Spaulding, '07, Pasadena, "In Presence of the New Occidental"; President John Willis Baer, LL.D., "The Speed Mania."
- Sept. 20** Address, Rev. Arthur S. Phelps, D.D., Los Angeles, "Character versus Deeds."
- Sept. 27** Address, Rev. Daniel F. Fox, D.D., Pasadena, "Forces that Count."
- Oct. 9** Address, Rev. Lapsley A. McAfee, D.D., Berkeley, "Individual Responsibility."
- Oct. 11** Address, Rev. Hugh K. Walker, D.D., Atlanta, Ga., "The Shores of the Ideal."
- Oct. 14** Address, Rev. Clarence A. Spaulding, '07, Pasadena, "The Rhodes Scholarships."
- Oct. 15-16** Rhodes Scholarship Qualifying Examinations for Southern California, held at Occidental.
- Oct. 16** Address, Dr. W. S. Taylor, Secretary Y.M.C.A., Shanghai, China.
- Oct. 25** Address, Mr. Ng Poon Chew, San Francisco, Advisor to the Chinese Consul in General, "The Old and the New China."
- Nov. 1** Address, Rev. Robt. Freeman, D.D., Pasadena, "Dogs"
- Nov. 4** Address, Mr. James H. Wallace, Student Secretary Y.M.C.A., Tokio, Japan, "Influence of Japan in the Awakening of China."
- Nov. 15** Address, Rev. Robert J. Burdette, D.D., Pasadena, "Moving Pictures."

- Nov. 19** Address, Mr. W. L. Green, Pasadena, "The Christian in Business."
- Nov. 21** Address before the Classical Society, Mr. Roland D. Stevens, Los Angeles, "A Visit to Rome."
- Nov. 21** Address, Mr. Kiyosue Inui, Japan, "Misrepresentations between Japan and America."
- Nov. 22** Address, Hon. Lorin A. Handley, City Clerk of Los Angeles, "Simplification of Methods and Processes of Government."
- Nov. 26** Home Concert of the Occidental College Glee Club.
- Dec. 3** Illustrated Lecture, Prof. William D. Ward, Ph.D., Occidental College, "The Baths of Rome."
- Dec. 6** Occidental-Redlands Debate, at Occidental.
- Dec. 13** Address, Rev. Charles M. Sheldon, D.D., Topeka, Kansas, "Essentials of an Education."
- Dec. 20** Address, Mr. A. Montgomery, the Farmer Painter, "Art."

1913

- Jan. 7** Address, Rev. Robert J. Burdette, D.D., Pasadena, "The Girl with a Handicap."
- Jan. 9** Address, Mr. Williel Thomson, '10, Los Angeles, "South America."
- Jan. 10** Address, Mr. Harry F. Ward, Chicago, "Educated Men and Women in the Social Awakening."
- Jan. 16** Address, Rev. Mark A. Matthews, D.D., Seattle, Wash., Moderator of the General Assembly of the Presbyterian Church in the U.S.A., "Life's Blue Print."
- Jan. 17** Lecture, Prof. Robert D. Williams, Ph.D., Pomona College, "Sleight of Hand."
- Jan. 17** Illustrated Lecture, Prof. Geo. F. Cook, Ph. D., Occidental College, "The Educational Voyager."
- Jan. 24** Illustrated Lecture, Prof. Wilbur A. Fiske, M.A., Occidental College, "California Mountains."
- Feb. 4** Lecture, Prof. Robert G. Cleland, Ph.D., Occidental College, "The Neglected Years in California's History."
- Feb. 6** Address, Rev. Carl Wallace Petty, '06, New York, "What Are Your Looking For."

- Feb. 7** Illustrated Lecture, Rev. Guy W. Wadsworth, D.D., Denver, Col., "Scientific Temperance."
- Feb. 13** Day of Prayer for Colleges. Sermon, Rev. Edwin F. Hallenbeck, D.D., San Diego.
- Feb. 14** Home Concert, Women's Glee Club of Occidental College.
- Feb. 18** Address, Prof. Francis G. Peabody, D.D., LL.D., Harvard University, "The Place and Function of Educated Men."
- Feb. 19** Address, Rev. F. G. Coan, D.D., President Urumia College, Persia, "Experiences of a Missionary in Persia."
- Feb. 21** Address, Mr. William Shaw, General Secretary Y.P.S.C.E., "Civic Religion."
- Feb. 27** Address, Mr. George W. Perkins, New York, "Educational Dividends."
- Feb. 28** Address, Prof. Henry van Dyke, D.D., LL.D., Princeton University, "The Goal of Higher Education."
- Feb. 28** Triangle Debate between Occidental, Pomona and U.S.C.
- Mar. 4** Lecture, Prof. Elbert E. Chandler, Ph.D., Occidental College, "The Soil."
- Mar. 14** Address, Rev. G. F. Kenngott, Ph.D., Supt. Congregational Church Extension Society, "Social Conditions in the United States."
- Mar. 19** Address, Hon. John W. Foster, Diplomat, "Present Conditions of the Diplomatic Service."
- Mar. 21** Address, Prof. Shailer Matthews, D.D., University of Chicago, "The College Man's Opportunity."
- Mar. 27** Intercollegiate Oratorical Contest, held at the University of Southern California.
- Mar. 28** Second Annual Complimentary Entertainment provided by Occidental College in honor of the High Schools of Southern California. Lecture, Prof. Henry van Dyke, D.D., LL.D., Murray Professor of English in Princeton University, "Tennyson."

- April 9** Address, Mr. Andrew Stevenson, Chicago, "Business Men in Christian Work."
- April 11** Reading of an Unpublished Story, by the author, Miss Zona Gale.
- April 12** Annual Convention of the Student Volunteer Union of Southern California, held at Occidental.
- April 14** Address, Mr. Philip A. Schwartz, Traveling Secretary of the Student Volunteer Union, "Opportunity for a Life Investment."
- April 18** Address, Rev. William Carter, D.D., Secretary of the International Peace Forum, "The Peace Movement."
- April 21** Address, Rev. John Balcom Shaw, D.D., LL.D., Chicago, "To Give, or to Take."
- April 28** Lecture, Mr. George Wharton James, Pasadena, Editor of "Out West," "California."
- May 2** Intercollegiate Prohibition Oratorical Contest, held at the Pasadena Y.M.C.A.
- May 9** Illustrated Lecture, Mr. Guy E. Talbott, Field Commissioner of the Federated Church Union, Los Angeles, "Hours and Wages."
- May 16** Address, Rev. E.P. Ryland, D.D., President Los Angeles Church Federation, "Peace as a Philosophy of Life."
- May 16** Intercollegiate Peace Oratorical Contest, held at Occidental.
- May 23** Reading, Mrs. Jessie Eldridge Southwick, Emerson School of Oratory, Boston, "Macbeth." Presented by the Arden Club.
- June 1** Vesper Service of the College Christian Associations.
- June 8** Baccalaureate Sermon, by President John Willis Baer, LL.D.
- June 9** Senior Play.
- June 10** Senior Class Day.
- June 10** President's Reception to the Seniors.
- June 11** Twenty-first Annual Commencement.
- June 11** Alumni Banquet.

Occidental College

Occidental is a Christian college of the liberal arts and natural sciences, with certain very definite aims. One of these is to provide the best possible training preliminary to the study of the learned professions. Those planning the practice of Law, for example, are offered a wide range of subjects fundamental to their calling, such as History, Economics, Sociology and English. Candidates for Medicine are supplied with an admirable program in Chemistry and Biology. Candidates for the ministry find their needs anticipated in the departments of Biblical Literature, Philosophy, History and the Classics. The prospective teacher, aspiring first of all to know his subject, must appreciate the variety of options set before him for specialization in his undergraduate course. The preparation afforded for post-graduate study is both ample and thorough. This is shown in the high rank taken by Occidental alumni in the graduate departments of the best known American universities, east and west.

In most departments of Engineering, the first two years may be taken at Occidental without loss of time or thoroughness. Numerous instances are on record where the advantages of the plan have been clearly proven.

The man facing a business career, as well as the man seeking a profession, will find at Occidental courses that harmonize with his particular purpose. Such courses as those in Modern Industrialism, Public and Corporation Finance, Accounting and Insurance, not to mention the more theoretical

branches of Economics, are of a nature to bear directly on his life work. And it is planned that they should. The day has passed when one can afford to spend four years in college merely for the mental discipline, and with no reference to his peculiar aptitudes or the calling he is to pursue. This fact, long recognized with relation to Law and Medicine, is coming to be recognized with relation to business. Here, as elsewhere, general and special training may go hand in hand without detriment to either. Theory can and must lead in the direction of the practical.

One purpose of the college, however, which can never be subordinated to another, is to fit men and women for life in its broadest sense. In whatever rank or station, the value of the mental discipline, the wide outlook and the high ideals here acquired is beyond calculation. The brand of culture which goes with an Occidental diploma means for the bearer reduced risk of failure, increased capacity for enjoyment, largely multiplied usefulness to society.

Though bound by no peculiar creed, Occidental stands firmly on the great truths of evangelical Christianity. Forever barring sectarianism, the word of God is held to be the one book of divine authority. Through faith in its teachings the founders of the college sought to mould young men and young women to lives of the highest usefulness, and in that faith their successors remain.

Last Term on the Old Campus

The last college opening on the old campus will take place September 24, 1913. Notwithstanding the new buildings will likely be ready for occupancy by that date, it has been deemed wise not to attempt

the transfer before the Christmas holidays. The purpose is to avoid a hurried removal and the disadvantage of unprepared surroundings. Disappointment over the delay is less keen in view of the very comfortable quarters now in use and still available. Their location is at Pasadena Avenue and Avenue 50, in Highland Park, one of the most attractive residence sections of Los Angeles. The buildings are modern in character, including a Hall of Letters, the Stimson Library, and a Men's Dormitory and Gymnasium.

The New Campus

The new campus, reached by the Eagle Rock division of the Los Angeles Railway and covering ninety acres, affords a landscape of unsurpassed beauty. In shape it resembles a roughly drawn semicircle, a low range of foothills representing the diameter, while the curved portion takes in a considerable section of the valley. Above the hills appear the Sierra Madre Mountains, including Mt. Lowe, and Mt. Wilson with its world-famous solar observatory. In two other directions the sky line is rendered picturesque by the Verdugo and Santa Monica ranges. A lower area toward the southwest gives the sea breeze direct access, thus purifying and tempering the atmosphere to a degree not often enjoyed away from the beaches. The grading of the campus has been an expensive matter, already exceeding \$20,000. In the end it will materially increase the attractions of a place over which Nature has cast an unusual charm. The planting of trees and shrubs on an extensive scale has already begun. The athletic field is to be a close copy of

Franklin Field, on the grounds of the Pennsylvania State University, widely known as one of the best in America.

New Buildings

Close against the hillside, but facing the valley, the Administration Building will presently stand. Flanking this site and farther to the front, two buildings are now being erected, companions in appearance and design, one to be known as the Johnson Hall of Letters and the other as the Fowler Hall of Science. The former is the gift of Mr. O. T. Johnson of Los Angeles, credited with large gifts to the college on more than one occasion heretofore. The latter is a memorial to Mr. Eldridge M. Fowler of Pasadena, erected by his daughter and granddaughter. Each of these buildings contains three stories, or four at the back, with ground dimensions 155 by 80 feet. The exterior, generally speaking, is after the style of the Italian Renaissance. The structural frame is of reinforced concrete, the outside walls being in white stucco with stone trimmings. The divisional walls are of hollow tile and may be removed when necessary, allowing a complete change of the interior arrangement at any time. Both structures are to be strictly fireproof.

Pending the erection of the Administration Building, all administrative offices will be located on the first floor of Johnson Hall. A temporary chapel, later to be used as a lecture hall, will be in the same building. The second floor and all above will be given over to class rooms, literary society rooms, and offices for various departments of instruction.

In Fowler Hall the departments of natural science will be afforded a home at once handsome and commodious. Every facility demanded by modern methods of instruction is here provided. The best features of laboratory or lecture-room equipment in use elsewhere are included. Among single structures devoted to pure science, no better model is to be found on the Pacific slope.

Swan Hall, which is being erected not far from Johnson Hall, is intended to furnish comfortable quarters for fifty-four young men. Twenty-seven bedrooms will be connected with twenty study rooms, and in addition ten outdoor sleeping rooms will be located on the top floor. Six shower baths are to be included. On the ground floor will be a large assembly room, with open fireplace and other appointments equally home-like. This building also will be fireproof and similar to the rest of the group in architectural design. It is given by Mrs. Frances B. Swan of Pasadena, as a tribute to the memory of her husband, Mr. James Swan.

A Library, a Women's Dormitory and a Gymnasium are among the buildings soon to be erected. Plans for two of these have already been accepted.

The following paragraphs are descriptive of equipment now in use on the old campus.

Library

The Library contains nearly eight thousand volumes, including many valuable reference works. Additions are continually being made. Several of the department libraries are especially creditable, being well stocked with the latest and best literature in their particular lines.

Laboratories and Apparatus

The Biological Laboratories are well equipped. The student in the beginning courses is provided with a compound microscope suitable for all ordinary work; in the higher courses where a microscope is required, each student has an instrument that is completely equipped with condenser, oil-immersion objective and camera. The departments have a very full equipment of stains, reagents and microscopical accessories, such as microtomes, paraffine baths and the like.

The zoological collections are adequate for present needs, containing representative types of the animal kingdom and some special preparations of both vertebrates and invertebrates. There is a working collection of bird skins. There are also a number of good models for embryology and a complete dissectable model of man.

The Botanical equipment is fully sufficient for the needs of the courses offered. Included in the collection is a catalogued herbarium of about 1000 sheets.

The department of Geology possesses the following collections, all properly classified and labeled: the George H. Parker Gold Medal Collection; the Gail Borden Collection of Minerals and Ores; the H. B. Gage Collection of Southern California Minerals; the Foote Collection—a physical series; the Ward Genetic Rock Collection; the J. C. Fales Paléozoic Fossil Collection; a Miscellaneous Collection of Minerals, Rocks and Ores, gathered in the field by the various classes since 1907 and containing a great amount of valuable material for class use. In addition to those

above named, the W. A. Fiske Collection of Lantern Slides possesses a rare value as illustrative of almost every phase of geological study. These collections accompanied by maps, models, charts and other illustrative material, greatly assist in acquiring a proper conception of the laws of dynamical and historical geology.

The Chemical laboratories occupy, pending removal, two frame buildings on the edge of the old campus. One of these buildings contains a lecture room, a laboratory for general chemistry and qualitative analysis, and a well equipped supply room. The other contains a laboratory for quantitative analysis and organic chemistry, and a weighing room, well supplied with analytical balances. Both laboratories are provided with modern desks, each with its own set of apparatus, so that the student may work independently. Extra apparatus may be obtained from the supply room as needed. New apparatus and equipment have been added each year as the needs of the courses demanded.

The department of Physics is equipped with a large supply of modern apparatus for demonstration from the best foreign makers, and with individual laboratory apparatus for two years of college work as well as for the elementary course. A valuable addition to the department's resources at the present location is a workshop supplied with a two-horsepower motor, a screw-cutting engine lathe, a wood lathe, a saw table, an emery grinder, and a one-kilowatt direct-current generator.

The department of Mathematics is equipped with a reference library of 200 volumes, by the best au-

thors, and covering every branch of mathematics. The department also has two sextants, transit, Y level, leveling rod, polar planimeter, slide rule, Thatcher's calculating machine, Crelle's calculating tables, a high-grade protractor, parallel rulers, celestial globe, planetarium, and a number of less important instruments.

Requirements for Admission

Admission to the Freshman Class

Candidates for admission to the Freshman Class should be sixteen years of age and provided with testimonials of good moral character. Applicants not presenting certificates from accredited high schools or academies will be required to take examinations in all subjects for which they seek admission credit.

Graduates of accredited high schools or academies will be given credit for the subjects in which they are recommended. All credits are, however, subject to the test of the class room. Blanks for certificates will be furnished on application to the Registrar, and it is expected that all applicants for admission without examination will use them. To be admitted to full Freshman standing the candidate must present admission credits amounting to fifteen units of academy or high school work, the unit being understood to represent five recitations per week in one subject continued through one school year. Of these fifteen units, eight are prescribed, seven are to be chosen by the candidate. In three of the prescribed subjects—History, Foreign Language, and Science—liberal options are allowed, thus further increasing the candidate's freedom of choice.

For unconditioned entrance the following admission subjects must be presented:

English	2 units
Algebra	1 unit
Plane Geometry	1 unit
Ancient History	} one.....1 unit
Med. and Mod. Hist.	
English History	
Hist. and Gov. of U.S.	
French	} one.....2 units
German	
Greek	
Latin	
Spanish	
Physics	} one.....1 unit
Chemistry	
Botany	
Zoology	
Physiology	
Chosen by the candidate	7 units
15 units	

The subject presented in fulfillment of the Science requirement must have been taken in the third or fourth year of the preparatory course.

Necessarily, the candidate must present all the prerequisites of the courses for which he proposes to register.

Conditioned Entrance

Candidates who are deficient in not more than one and one-half units of the required fifteen may be admitted as conditioned Freshmen; but all entrance conditions must be removed before any student may be ranked as a Junior.

Advanced Standing

Students from other institutions of recognized collegiate rank will be admitted to such standing as seems fair in the judgment of the Faculty. The application must be accompanied by a letter of honorable dismissal, a catalogue of the institution granting it, an official statement of subjects completed, with the number of terms and the number of hours per week devoted to each subject, and a similar statement of entrance credits.

Graduates of the State normal schools who are also graduates of accredited high schools and who are especially recommended by the normal school faculties, may enter Occidental with a credit of thirty-two units, and thus be enabled to complete their college course in three years. Those who have graduated in the Academic Professional Course of the state normal schools will be allowed forty-eight units when they can in one semester's work qualify for admission to the Junior year.

Students at Large and Special Students

No student is permitted to register for less than twelve units of work in any semester, save by a special vote of the Faculty. Subject to this provision, recommended graduates of accredited pre-

paratory schools presenting any fifteen units included in the list of admission subjects named below may be admitted as students at large, with the privilege of taking such courses as their preparation allows. Those whose preparation does not admit them to the status of students at large or of conditioned Freshmen are sometimes admitted as special students, but only in case of age and maturity. Students at large and special students are subject to the same regulations as the others. They may become candidates for a degree at any time by meeting the usual entrance requirements. On withdrawing from the institution they will be granted certificates showing the work completed.

List of Admission Subjects

Other subjects, not named below, will be accepted under proper conditions. Because of their unsettled status in the secondary schools, no attempt is here made to define them. Included in the number are Economics, Music, Agriculture and the Industrial Arts.

1. English, Elementary 2 units
2. English, Advanced Literature 1 or $1\frac{1}{2}$ units
3. English, Advanced Composition $\frac{1}{2}$ or 1 unit
4. Algebra, Elementary 1 or $1\frac{1}{2}$ units
5. Algebra, Advanced $\frac{1}{2}$ or 1 unit
6. Plane Geometry 1 unit
7. Solid Geometry $\frac{1}{2}$ unit
8. Plane Trigonometry $\frac{1}{2}$ unit
9. Ancient History 1 unit

10. Mediaeval and Modern History	1 unit
11. English History	1 unit
12. History and Government of U.S.	1 unit
13. Latin, Elementary	2 units
14. Cicero-Sallust	1 unit
15. Virgil-Ovid	1 unit
16. Greek Elementary	2 units
17. Homer and Greek Composition	1 unit
18. German, Elementary	2 units
19. German, Intermediate	1 unit
20. German, Advanced	1 unit
21. French, Elementary	2 units
22. French, Intermediate	1 unit
23. French, Advanced	1 unit
24. Spanish	2 units
25. Physics	1 unit
26. Chemistry	1 unit
27. Botany	1 unit
28. Zoology	1 unit
29. Physiology	1 unit
30. Physical Geography	1 unit
31. General Science	1 unit
32. Freehand Drawing	1 unit
33. Mechanical Drawing	1 unit

Description of Admission Subjects

1. ***English, Elementary.** (2 units). It is recommended that in the first two years' work approximately equal division of time be made between (a) and (b).

(a) Review of grammar; drill in spelling, punctuation, and elementary principles of composition and rhetoric.

(b) Study of the following pieces of literature. The list, in which certain substitutions may be made, is that of the College Entrance Examination Board for 1913, 1914, 1915. With a view to large freedom of choice, the books provided for reading are arranged under five divisions, each division being made up of several sections, as indicated by semicolons. At least ten of these sections are to be selected, two from each division.

I. The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the Iliad, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; Vergil's Aeneid. The Odyssey, Iliad, and Aeneid should be read in English translations of recognized literary excellence.

For any section of this division a section from any other division may be substituted.

II. Shakespeare's Merchant of Venice; Midsummer Night's Dream; As You Like It; Twelfth Night; Henry the Fifth; Julius Caesar.

III. Defoe's Robinson Crusoe, Part I; Goldsmith's Vicar of Wakefield; either Scott's Ivanhoe, or Quentin Durward; Hawthorne's House of the Seven Gables; either Dickens's David Copperfield, or Tale of Two Cities; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; George Eliot's Silas Marner; Stevenson's Treasure Island.

*Although applicants are admitted to Freshman English who are recommended by accredited schools in a minimum of two years of English, it is strongly advised that the subject be pursued for three years, or preferably four. Students whose work after admission proves notably defective in spelling, punctuation, idiom, or paragraphing will be required to remove the defect under conditions named elsewhere. Admission subject 1 (English, Elementary) contains the required minimum for entrance.

IV. Bunyan's *Pilgrim's Progress*, Part I; the Sir Roger de Coverley Papers in the *Spectator*; Franklin's *Autobiography* (condensed); Irving's *Sketch Book*; Macaulay's *Essays on Lord Clive and Warren Hastings*; Thackeray's *English Humourists*; Selections from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and Letter to Horace Greeley, along with a brief memoir or estimate; Parkman's *Oregon Trail*; either Thoreau's *Walden*, or Huxley's *Autobiography* and selections from *Lay Sermons*, including the addresses on *Improving Natural Knowledge*, *A Liberal Education*, and *A Piece of Chalk*; Stevenson's *Inland Voyage and Travels with a Donkey*.

V. Palgrave's *Golden Treasury* (First Series), Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns; Gray's *Elegy in a Country Churchyard* and Goldsmith's *Deserted Village*; Coleridge's *Ancient Mariner* and Lowell's *Vision of Sir Launfal*; Scott's *Lady of the Lake*; Byron's *Childe Harold*, Canto IV, and *The Prisoner of Chillon*; Palgrave's *Golden Treasury* (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley; Poe's *Raven*, Longfellow's *Courtship of Miles Standish* and Whittier's *Snow-Bound*; Macaulay's *Lays of Ancient Rome* and Arnold's *Sohrab and Rustum*; Tennyson's *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *Cavalier Tunes*, *The Lost Leader*, *How they Brought the Good News from Ghent to Aix*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *Incident of the French Camp*, *Herve Riel*, *Pheidippides*, *My Last Duchess*, *Up at a Villa—Down in the City*.

2. English, Advanced Literature. (1 or 1½ units.)

(a) Shakespeare's *Macbeth*; Milton's *Comus*, *L'Allegro*, and *Il Penseroso*; Burke's *Speech on Conciliation with America*, or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration*; Macaulay's *Life of Johnson*, or Carlyle's *Essay on Burns*. (1 unit.)

(b) Survey of great periods of English Literature, emphasizing leading facts of the life and time of authors studied during course. Long's *English Literature* recommended. (½ unit.)

3. English, Advanced Composition. ($\frac{1}{2}$ or 1 unit.)

(a) Training, theoretical and practical, in various forms of discourse: narration, exposition, description and argumentation. ($\frac{1}{2}$ unit.)

(b) Formal instruction in debate and writing orations may be added, taking the place, for credit, of 2b. ($\frac{1}{2}$ unit.)

4. Algebra, Elementary. (1 or $1\frac{1}{2}$ units.) The fundamental laws, laws of exponents, formulas of multiplication, binomial theorem with positive integral exponent, factoring, common divisors and multiples, radicals, simultaneous equations of the first degree, quadratic equations, theory of quadratic equations, the elementary presentation of roots, powers, series and logarithms.

5. Algebra, Advanced. ($\frac{1}{2}$ or 1 unit.) Determinants of the second and third order, with their applications to simple problems; simultaneous quadratic equations, and equations essentially quadratic; fractional exponents, fractional and irrational equations; roots and powers of polynomials; the progressions and other simple series; binomial theorem; logarithms with practical applications; elements of the theory of equations and mathematical induction.

6. Plane Geometry. (1 unit.) The general properties of plane figures, the circle and the measure of angles, areas, regular polygons, and the measure of the circle; the usual demonstrated theorems and original propositions.

7. Solid Geometry. ($\frac{1}{2}$ unit.) Relations of lines and planes to space; the properties of prisms, pyramids, cylinders, and cones; the sphere and spherical triangle; original propositions.

8. Plane Trigonometry. ($\frac{1}{2}$ unit.) The development of the general formulae of elementary plane trigonometry; the theory and use of logarithms; the numerical solution of plane triangles and of trigonometrical problems in heights and distances.

9. Ancient History. (1 unit.) A year's work in the history of the Eastern Nations, Greece and Rome, to the establishment of Charlemagne's empire. In Grecian history special attention should be given to the period from the fifth to the second century

B.C., and in Roman history to the period from the conquest of Italy to the establishment of Christianity. Outlines, maps, and papers on special topics should be prepared, and should be presented at the time of the examination.

10. Mediaeval and Modern History. (1 unit.) A year's work in European history from Charlemagne's time to the present. Special attention should be given to mediaeval institutions, the struggle between the empire and the Papacy, the Reformation, and the French Revolution. About one-fifth of the work should be put upon the nineteenth century. Outlines, maps and papers upon special topics should be prepared, to be presented at the time of the examination.

11. English History. (1 unit.) A year's work in the history and government of England. Maps, outlines and special reports should be presented at the time of the examination.

12. History and Government of the United States. (1 unit.) A year's study beyond the grammar school, with considerable work in outlines, papers, notes and reports, to be presented at the time of the examination. The candidate for admission should have a good working knowledge of the Constitution of the United States, and should be familiar with the works of reference on American history found in good high school libraries.

13. Latin, Elementary. (2 units.) (a) Accurate knowledge of all the regular inflections and of the common irregular inflections, familiarity with the ordinary rules of syntax and with the vocabulary of the author read, together with the ability to use this knowledge in writing simple Latin prose. (b) An amount of reading not less than the first four books of Caesar's Gallic War, which amount may be chosen from any part of the following: Caesar (Gallic War and Civil War), Nepos (Lives). Ability to translate from the easier portions of the text at sight.

14. Cicero-Sallust. (1 unit.) The amount read must equal Cicero's orations against Catiline, for the Manilian Law and for the Poet Archias. Only the last two are prescribed. The remainder may be chosen from Cicero (Orations, Letters and De Senectute) and Sallust (Catiline and Jugurtha). Sight

translation, and composition based on the authors read, form an integral part of the requirement.

15. Vergil-Ovid. (1 unit.) The reading must equal in amount the first six books of Vergil's *Aeneid*. Books I. and II., together with either IV. or VI., are prescribed. The remainder may be chosen from Vergil (*Bucolics*, *Georgics*, *Aeneid*) and Ovid (*Metamorphoses*, *Fasti*, *Tristia*). The requirement includes sight translation from the same authors, with composition based on the authors previously read. Thorough training in the elementary principles of prosody is assumed.

16. Greek, Elementary. (2 units.) The requirement includes a knowledge of prose forms and prose syntax, a good Xenophon vocabulary, and some knowledge of English derivatives. Forms and syntax are usually sufficiently drilled upon, but generally not enough attention is given to vocabulary and English derivatives. White's *First Book*, Xenophon's *Anabasis*, I-IV., and Pearson's *Composition*, Parts I-II., represent the work to be covered.

17. Homer and Greek Composition. (1 unit.) Homer's *Iliad* I-III. and Pearson's *Prose Composition* are the minimum of preparation. In Homer, a knowledge of Homeric grammar and the prose equivalents of common poetical words, where there are such, and the ability to read Homer not only metrically but with expression, are essential. Some attention should also be given to character study and to Homeric life. In composition, the ability to do easy prose based on Xenophon is required.

18. German, Elementary. (2 units.) This requirement covers two years of high school German. A thorough knowledge of the elements of German grammar is expected and the ability to translate ordinary German into English at sight or English into German. A fair knowledge of poetry and evidence of solid composition work is also required.

19. German, Intermediate. (1 unit.) The ability to read at sight ordinary German prose or poetry, to translate easy English into German, to answer simple questions in German, and to give evidence of familiarity with the essentials of German grammar, including particularly the rules concerning the de-

clension of adjectives and nouns, the conjugation of verbs and word order. Amount of reading required, about 400 pages.

20. German, Advanced. (1 unit.) German prose reading of the more difficult selections from standard authors. Poems memorized, composition work which leaves no doubt as to the thorough grammatical drill of the applicant. The candidate must be able to write in German, short, original themes upon assigned topics. Not less than 700 pages of good modern literature required.

21. French, Elementary. (2 units.) The essentials of grammar, including the regular and the most common irregular verbs, forms and positions of pronouns. The reading of at least 250 pages of modern prose. Easy composition and dictation. Conversation on the text read. Particular stress should be laid on correct pronunciation.

22. French, Intermediate. (1 unit.) Review of the essentials of grammar. Study of irregular verbs and the study of advanced grammar. Composition, written and oral. Reading of about 400 pages of prose by standard modern authors and one or two modern plays. Written analysis and criticisms on text read and conversation on the same. Sight reading and translation. Special attention should be paid to the correct use of idioms.

23. French, Advanced. (1 unit.) The reading of about 800 pages of classical and modern French works by standard authors. The writing of numerous short themes either on topics of every day life or on the text read. Frequent discussions in French on the text read, and advanced composition.

24. Spanish. (2 units.) Thorough work in grammar, with especial attention to verb drill, including the subjunctive. Sight reading and translation of about five hundred pages, including some poetry. Easy Spanish composition and original short themes.

25. Physics. (1 unit.) The requirement represents at least one daily exercise throughout the year (preferably the last) in academy or high school, and includes elementary mechanics, heat, sound, light, electricity and magnetism. There should be close relation between class work, lecture, demonstration work

and laboratory work. Emphasis should be placed on principles, application of principles to daily life, and ability to solve problems and to think. The class work should include the study of some standard, up-to-date text; such, for example, as Millikan and Gale's First Course in Physics. In the laboratory the student should individually perform with some accuracy at least thirty-five typical experiments, and should present at entrance a well-written note book, properly indexed, duly signed by the instructor.

26. Chemistry. (1 unit.) The completion of an elementary course in general chemistry is required, with practical work in the laboratory. The work is represented by that given in Brownlee's First Principles of Chemistry and Laboratory Manual. Note books, satisfactory to the head of the department, may also be required.

27. Botany. (1 unit.) Applicants for credit in this subject must show ability, obtained during a full year's work of five exercises per week, to solve problems in the field and laboratory. A well-kept note book signed by the instructor must accompany the application. The pupil must have a general knowledge of plant morphology and physiology and also be able to recognize readily the common orders of flowering plants. The following texts or their equivalents suggest the scope of the work required: Osterhout's Experiments, Bergen's Elements of Botany.

28. Zoology. (1 unit.) The prerequisites for credit in this subject correspond in time and method to those called for in Botany. The scope of the work is suggested by the text of Linville and Kelly.

29. Physiology. (1 unit.) Credit will not be given for elementary physiology and hygiene done in the grammar grades. The work must at least have covered the equivalent of Martin's Human Body. Four hours per week must have been spent in a well organized laboratory. Candidates must present note books signed by an instructor.

30. Physical Geography. (1 unit.) This course should have seven periods per week for one year, of which four should be arranged as double laboratory periods. The subject as presented in a text book should be supplemented by laboratory work, including experiments and map study. Records of

this work should be kept in a note book, which should be presented as a part of the entrance requirement. The work should include the commonly accepted divisions of the subject, viz.: mathematical geography, the atmosphere, the ocean, and land forms.

31. General Science. (1 unit.) The requirement represents at least five forty-five-minute exercises a week for one year, of which two-fifths or more should be laboratory work. A record should be made of at least thirty-five experiments individually performed and the note book presented at entrance.

It is suggested that the course be based upon physical principles so related to the biological that one science will dovetail into others which are related in principles and applications. The course may well include such common basic phenomena and facts as: Oxidation; physical and chemical changes; composition of air, water, food, rocks and soil; physiological processes of life, growth and decay; hygiene and sanitation with reference to bacteria in the home, agriculture, disease and the industrial arts; uses and sources of foods; cycle of organic life and interdependence of plants, animals and man; influence of climatic, seasonal and geologic changes; relation of the earth to heavenly bodies.

32. Freehand Drawing. (1 unit.) The requirement represents a daily exercise of forty-five minutes for two years; the credit allowed, however, must be based on the amount and quality of the work accomplished, which must be submitted for examination.

The work should consist of studies of the principles of light and shade and perspective from geometric models, sphere, cube, prisms, etc., and other simple objects of similar form. They should be treated both singly and in groups.

33. Mechanical Drawing. (1 unit.) The requirement represents the work usually covered with a daily exercise of forty-five minutes throughout one year. It should consist of exercises adapted to develop neatness and accuracy in the use of drawing instruments, geometrical figures and curves, free hand lettering, and other exercises leading up to the technical courses. The student's work must be submitted for examination.

Requirements for Graduation

No student is permitted to graduate who has not spent at least one year in resident study at the college.

The unit employed in reckoning college credits is one exercise per week in one subject continued through a semester. One hundred and twenty-eight of these units are required for graduation, sixty-eight to be completed normally in the Freshman and Sophomore years, and sixty in the Junior and Senior. A subject counted for admission to the Freshman class or for the removal of an entrance condition may be allowed to take the place of a specific requirement, where practically the same ground has been covered, but not to diminish the total number of units required for a degree.

Courses of Study

The courses of study have been arranged with three objects in view:

1. General culture.
2. Special training in particular lines.
3. Free election on the part of the student of such subjects as harmonize best with his individual purpose.

To meet the requirement of general culture, certain subjects are prescribed in all courses leading to a degree, viz.:

*Physical Training	4 units
†Biblical Literature	8 units
Rhetoric and Composition	6 units
English Literature	6 units
§French or German	14 units
¶Mathematics	3 units
Natural Science	6 units
History	6 units
Psychology	3 units
Logic	3 units

To meet the requirement of special training, every student is expected to choose two closely allied departments in which to carry his investigations beyond the elementary stage. These two departments may be

First, any two of the following: English, French, German, Spanish, Greek, Latin, History.

Second, any of the following combinations: Economics and History, Mathematics and Physics, Physics and Chemistry, Chemistry and Biology.

From the two departments thus chosen, Upper Division courses amounting altogether to eighteen units must be completed before graduation. Their

*To be taken in the Freshman and Sophomore years.

†A two-hour course to be taken either the first or second semester of each year.

§Only 6 units where a high school credit of two years in French or German has been presented on entering.

¶Not required where Trigonometry or Solid Geometry has been presented on entering.

prerequisites, found among the Lower Division courses, should be completed for the most part in the Freshman and Sophomore years.

Outside the restrictions already indicated, the student is given full freedom as to choice of courses, subject always to the prerequisites named under "Departments of Instruction."

Degrees

Any student completing the above requirements and maintaining an honorable record to the end of his course will receive the degree of A.B. or B.S., depending on the departments in which he has specialized.

Departments of Instruction

Biblical Literature

Professor Kellogg

1. Pentateuch.

The five books of Moses are studied with a view to the mastery of the facts recorded: the creation of the world and of man, the entrance of sin, the beginnings of redemption, of national life, of the covenant people. The Mosaic Law is studied in relation to the "better covenant" to follow.

2 hours, first semester.

2. Historical Books of the Old Testament.

This course is a continuation of course 1, and carries the student through the period of the Conquest, the Commonwealth and into the time of the Kingdom.

2 hours, second semester.

3. Pauline Epistles.

Advanced work is undertaken in synthetic study of the Epistles, chiefly Romans. Analysis of material and exposition of fundamental Christian truth as held historically by the church is undertaken from the text of the Epistles.

2 hours, second semester.

4. Jeremiah and the Minor Prophets.

These books are studied with particular reference to the political situation of the times which they portray. The immediate message and the messianic message are discriminated. The prophets were the statesmen of the Theocracy.

2 hours, first semester.

5. The Book of Isaiah.

This massive prophecy is studied in its historical relationships and particularly in its messianic messages.

2 hours, one semester.

7. Life of Christ.

This study of the Gospels is designed to cover not merely the mechanical outline of the life of our Lord, but deeper teachings of His ministry and message, His death and resurrection.

2 hours, one semester.

8. The Acts and the Earlier Epistles.

The transition from the period covered by the Gospels to the period when by means of Epistles the churches are instructed in mature Christian truth is covered by the Acts. This book and certain of the earlier Epistles are studied with a view to the mastery of facts which are formative in the beginning of church history.

2 hours, one semester.

11. The Poetry of the Bible.

This course involves the study of songs commemorative of deliverance from enemies, the psalms of historical summary, the messianic psalms, and songs of religious experience.

2 hours, one semester.

12. The Bible and Historic Faith.

This course assembles the testimony of the scriptures on the fundamental teachings of the church in all ages. The doctrines of God, of man, of sin and redemption are studied as they lie imbedded in the Bible records.

2 hours, one semester.

13. Hebrews and the Shorter Epistles.

The ultimate exclusion of Christian Jews from the temple worship calls forth the book of Hebrews, a book of "better things" than those connected with the temple worship. The fulfillings of the ritual are traced in this course, and certain of the later epistles are studied.

2 hours, one semester.

14. The Post-Captivity Period.

The return from Babylon and the period between the Testaments is covered by a study of the post-captivity books and other historical sources.

2 hours, one semester.

Biology

Professor Esterly
Professor Eggleston

Zoology

Professor Esterly.

LOWER DIVISION COURSES

1. Principles of Zoology.

The scope of this course is indicated by the name. Systematic zoology, morphology and physiology are covered, and topics of general interest as well as facts and theories connected with various lines of thought in the science are taken up from time to time. Instruction is by means of lectures and written quizzes and papers upon assigned topics.

3 hours, throughout the year (6 units).

2. General Zoology.

A laboratory course, in which invertebrate types are studied, and the shark among vertebrates. Course 2 must be taken by all who expect to pursue advanced courses in zoology.

Prerequisite, course 1 or its equivalent completed or in progress.

6 hours, first semester (2 units).

3. General Zoology.

A laboratory course, intended to give some insight into vertebrate embryology, histology and anatomy. The development of the frog, toad, or salamander is followed, and the salamander and frog, one or both, are used in dissection.

Prerequisite, course 2.

6 hours, second semester (2 units).

7. Field Zoology.

Principally a laboratory or field course, the aim of which is to enable students to become acquainted with the higher vertebrates, especially the birds inhabiting this region. Not given to less than five students, nor more than ten.

Prerequisite, at least Zoology 1.

1 afternoon in the field weekly, second semester (1 unit).

8. Human Physiology.

Lectures, quizzes, and experimental demonstration by means of modern apparatus, preparations and models.

Prerequisite, course 1.

3 hours, first semester (3 units).

UPPER DIVISION COURSES

4. Anatomy of Vertebrates.

Lectures and laboratory. The course aims to cover the higher vertebrate groups in a comprehensive way. The cat is the principal subject of dissection.

Prerequisite, courses 1, 2 and 3.

6 hours in the laboratory and 2 hours of lectures or recitations, first semester (4 units).

5. Cytology and Histology.

Lectures and laboratory. The animal cell is studied in its various phases of activity, and the microscopical anatomy of various tissues and organs of vertebrates is taken up. There is constant practice in the use of reagents and stains, and in the preparation of mounts and series of sections for the microscope. Not given in the same year with course 6. Given in 1913-1914.

Prerequisite, courses 1, 2 and 3.

9 hours in the laboratory and 2 hours of lectures or recitations, second semester (5 units.)

6. Embryology.

Lectures and laboratory. The development of vertebrates is studied by means of a text-book supplemented by lectures. There is constant practice in the laboratory in embryological meth-

ods, the principal objects of study being the chick and the pig. Not given in the same year with course 5. Omitted in 1913-1914.

Prerequisite, courses 1, 3 and 4.

9 hours in the laboratory and 3 hours of lectures or recitations per week, second semester (6 units).

Botany

Professor Eggleston.

1. Cryptogamic.

The study of bacteria, moulds, mosses and ferns.

1 hour lecture and 2 three-hour laboratory periods, first semester (3 units).

2. Phanerogamic.

A consideration of the structures and functions of flowering plants.

2 hours of lectures and 2 two-hour laboratory periods, second semester (3 units).

3. Economic Botany.

The study of the fundamentals of agriculture and forestry.

Prerequisite, course 2.

3 hours laboratory, throughout the year; 1 hour lecture, second semester only (3 units).

Chemistry

Professor Chandler

Assistant Fred H. Eldred

LOWER DIVISION COURSES

1. General Inorganic Chemistry.

Section I. for those without, and section II. for those with entrance Chemistry. These sections meet together twice a week for lectures, and once a week separately for recitations and special instruction. Smith: Chemistry for Colleges.

3 hours, throughout the year (6 units).

2. General Chemistry Laboratory.

Laboratory work for section I. of course 1. Smith and Hale: Laboratory Manual of General Chemistry.

3 hours, throughout the year (2 units).

3. Qualitative Analysis.

Laboratory work for section II. of course 1. Lectures and recitations upon the theory and practice of qualitative analysis given during the separate meetings of section II. and credited under course 1. Stieglitz: Qualitative Chemical Analysis. Volumes 1 and 2.

6 hours, throughout the year (4 units).

4. Quantitative Analysis.

Practice in the general methods of gravimetric, volumetric and electrolytic determinations, with occasional lectures upon the principles involved. Talbot: Quantitative Chemical Analysis.

Prerequisite, course 3.

9 hours, either semester (3 units).

5. Quantitative Analysis.

Continuation of course 4.

Prerequisite, course 4.

9 hours, either semester (3 units).

UPPER DIVISION COURSES

6. Organic Chemistry.

Lectures and recitations upon the chemistry of the aliphatic and aromatic compounds. Perkin and Kipping: Organic Chemistry.

Prerequisite, course 4, but may be taken as a Lower Division course with courses 1 and 2 as the only prerequisites.

4 hours, first semester (4 units).

7. Organic Chemistry Laboratory.

Preparation and reactions of typical organic compounds. Jones: Laboratory Outline of Organic Chemistry.

Prerequisite, course 6 completed or in progress.

3 hours, throughout the year (2 units).

8. Physical Chemistry.

Lectures and recitations in the field of physical and electro-chemistry. Bigelow: Theoretical and Physical Chemistry. LeBlanc: Electro-Chemistry. To alternate with course 9.

Prerequisite, courses 4 and 6.

4 hours, second semester (4 units).

9. Industrial Chemistry.

Lectures and recitations. Rogers and Aubert: Industrial Chemistry. To alternate with course 8.

Prerequisite, courses 4 and 6.

4 hours, second semester (4 units).

10. Advanced Chemistry Laboratory.

Special methods of quantitative analysis, including water, gas, soil, feed, food and electrolytic analysis; assaying; organic and inorganic preparations; physical chemistry measurements. The student may choose from these subjects and so fit himself for technical or research work.

Prerequisite, course 5.

9 hours, either semester (3 units).

Economics

Professor Wright

Associate Professor Cleland

Instructor Johnston

Courses in Commerce.

Under this department are included the Courses in Commerce announced in the catalogue of 1912. Their direct bearing upon the larger problems of business life will be apparent at a glance. Nor is proof needed of their value in a practical way to men of any calling. Those, on the other hand, to whom the field of pure Economics is more inviting will find the material equally valuable.

Students who major in this department will be required to take History 1 and 2 as a minor. A thorough reading knowledge of French, German, or Spanish is also essential, and should be regarded as an integral part of the work.

LOWER DIVISION COURSES

1. Principles of Economics.

An introductory course dealing with modern economic theories and practical problems. The production and the consumption of wealth, the distribution of wealth among the agents of production, the principles and problems of exchange.

3 hours, throughout the year (6 units).

Professor Wright.

2. Physical Geography.

A study of the physical environment of man. The changes and economic relations of land forms. The factors controlling weather and climate.

3 hours, first semester.

Professor Wright.

3. Economic Geography.

A study of the relation of environment to production and trade, including man's reaction upon his environment. Special attention will be paid to the elements of industrial greatness of the United States, Great Britain, and Germany.

Prerequisite, course 2 or admission subject 30.

3 hours, second semester.

Professor Wright.

4. Insurance.

The economic principles of insurance. The history and financial development of life insurance. A brief survey of the practice of fire, marine, property insurance, etc.

3 hours, first semester.

Professor Wright.

5. Accounting.

Fundamental theory and practice of accounts. Theory and practice of auditing. Advanced theory and practice of accounting. Advanced auditing. Working papers and reports. Commercial law.

2 hours of lecture and recitation, 1 laboratory period, both semesters (6 units).

Instructor Johnston.

UPPER DIVISION COURSES

History 1 and Economics 1 are prerequisite to all Upper Division courses in this department.

10. Money and Banking.

The fundamental principles of monetary theory, the history and the practice of banking, and the discussion of current problems and legislation.

3 hours, throughout the year (6 units).

Professor Wright.

11. Statistics.

An elementary course, including the history, theory, and methods of statistics. Practice in compiling, plotting, and interpreting statistics.

3 hours, second semester.

Professor Wright.

12. Elements of Jurisprudence.

A study of the principles that underlie the "formal science of positive law," and of their historical development. Some attention will be paid to the rudiments of commercial law.

2 hours, throughout the year (4 units).

Associate Professor Cleland.

13. Economic History of the United States.

A study of the economic development of the American people. Emphasis will be laid upon the economic life of colonial times, the influence of westward expansion, and the causes and tendencies of present day conditions.

3 hours, first semester.

Associate Professor Cleland.

14. Public Finance.

A study of the theories and methods of taxation. Attention will be paid to the collection and disbursement of public funds by federal, state, and local authorities, and by European governments.

3 hours, second semester.

Associate Professor Cleland.

15. Corporation Finance.

The place of the corporation in modern industrial organization. Special attention will be paid to corporate organization and management. The evils of corporate organization and public policy toward corporations. Recent legislation, particularly in California.

3 hours, first semester.

Professor Wright.

16. Modern Industrialism.

A critical study of the problems arising from present industrial conditions—the relation of labor and capital, combinations, etc.—and of current questions of special interest and importance.

3 hours, second semester.

Professor Wright.

Education

Professor Cook

1. History of Education, Earlier Period.

The Biblical idea of education. Educational theory and practice in Greece and Rome, and in the leading nations of Europe during the Middle Ages. Lectures. Monroe's History of Education. Laurie's Historical Survey of Pre-Christian Education. Davidson's Education of the Greek People. To alternate with course 2.

Prerequisite, Junior standing.

3 hours, first semester.

2. History of Education, Later Period.

Educational theory and practice in the more advanced nations of modern times. Lectures. Monroe's History of Education. Quick's Educational Reformers. Supplementary reading. To alternate with course 1.

Prerequisite, Junior standing.

3 hours, first semester.

3. Science of Education.

A study of the fundamentals and principles of education. The subject is considered in relation to the mental and physical sciences. Problems of the pupil, of the teacher and of the school are discussed, and underlying psychological theories are investigated. Lectures. Henderson's Principles of Education. Horne's Psychologic Principles of Education. Harris's Psychologic Foundations. Supplementary reading. To alternate with course 4.

Prerequisite, Junior standing.

3 hours, second semester.

4. Philosophy of Education.

This course will include a study of the aim, the meaning and the individual and social aspects of education, educational values, the curriculum, correlation of studies, interest, attention, the art of study. Lectures. Horne's Philosophy of Education. Supplementary reading. To alternate with course 3.

Prerequisite, Junior standing.

3 hours, second semester.

English

Professor Odell

Assistant Professor Cunningham

Assistant Professor Paul

LOWER DIVISION COURSES

A. Elementary Composition.

To remove deficiencies in the English of the preparatory course. Must be passed and the fact recorded before any student will be ranked as a Junior. May be passed in any one of three ways: (a) By showing proficiency in the subject in connection with the work of English 1 or 2. (b) By making satisfactory improvement in connection with the work of English 1 or 2. (c) By taking a course in the subject. Any student failing to pass the requirement in one of these ways before the middle of the Sophomore year will be registered in English A for the following semester.

1 hour, second semester (no credit).

Assistant Professor Paul.

1. Rhetoric and Composition.

Based on literary masterpieces. Description and narration, first semester; exposition, second semester. Daily practice in oral and written composition. Required in all courses.

2 hours, throughout the year (4 units).

Assistant Professor Paul.

2. Advanced Composition.

Exposition and argument. Study of models and text. Daily practice, oral and written, in the preparation and presentation of material. Required in all courses.

Prerequisite, course 1.

2 hours, first semester.

Professor Odell.

3. History of the English Language.

Historical English grammar, with illustrative selections from Old and Middle English Literature.

2 hours, second semester.

Professor Odell.

5. Early Nineteenth Century Prose.

Lamb, DeQuincey, Landor, Macaulay. A study of representative works of these writers, with special reference to qualities and varieties of prose style. Designed particularly to fit students for the more advanced courses in literature. Required alternately with course 6. Omitted in 1913-1914.

3 hours, first semester.

Professor Odell.

6. Victorian Prose Writers.

Carlyle, Ruskin, Arnold, Stevenson. Required alternately with course 5.

3 hours, first semester.

Professor Odell.

7. Victorian Poets.

Tennyson, Browning, Rossetti, Morris, Swinburne. Emphasis on the elements of poetic form and poetic criticism. Introductory to more advanced courses in poetry. Required in all courses.

3 hours, second semester.

Assistant Professor Cunningham.

8. Public Speaking.

Practice in declamation and other forms of public address, with some study of the principles of vocal expression.

Prerequisite, course 2.

2 hours, first semester.

Assistant Professor Paul.

9. Oral Debate.

Written and oral work. Analysis, brief-making, and debating. The class is divided into two sections, each section debating once a week on a question previously assigned.

Prerequisite, course 2.

2 hours, second semester.

Assistant Professor Paul.

UPPER DIVISION COURSES

Courses 1, 2 and 7, together with either 5 or 6, are prerequisite to all upper division courses.

11. Early Nineteenth Century Poets.

Wordsworth, Coleridge, Byron, Shelley, Keats. A study of the romantic movement of the early part of the nineteenth century.

3 hours, first semester.

Assistant Professor Cunningham.

12. Shakespeare.

The principal plays read chronologically, with special attention to the development of Shakespeare's mind and art.

3 hours, second semester.

Professor Odell.

13. Earlier Nineteenth Century Novelists.

Jane Austen, Scott, Dickens, Thackeray, George Eliot. Given alternately with course 21. Omitted in 1913-1914.

3 hours, first semester.

Professor Odell.

14. The Short-Story.

A course in short-story writing, based on a study of the masterpieces of the art, with special reference to principles of construction.

2 hours, second semester.

Professor Odell.

15. The Elizabethan Age and the Puritan Period.

A course in the poetry of the period, with emphasis on the work of Spenser and Milton.

Given alternately with course 16. Omitted in 1913-1914.

3 hours, second semester.

Professor Odell.

16. Restoration and Eighteenth Century Literature.

A survey of the leading poets and prose writers from Dryden to Burns, with emphasis on the rise of the romantic school.

3 hours, second semester.

Professor Odell.

18. Thesis.

In connection with any of the upper division courses, the student may, with the permission of the instructor, write a thesis embodying some piece of research.

1 unit, either semester.

Professor Odell.

19. Anglo-Saxon.

First semester: The outlines of Anglo-Saxon grammar. Bright's Anglo-Saxon Reader is used. Second semester: Beowulf.

During the year, English literature from the beginning to the Norman Conquest.

3 hours, throughout the year (6 units).

Professor Odell.

20. Chaucer.

A detailed study of a large number of the Canterbury Tales and other poems.

3 hours, second semester.

Professor Odell.

21. Later Nineteenth Century Novelists.

Meredith, Hardy, Stevenson, Howells, Mrs. Humphrey Ward, DeMorgan. Given alternately with course 13.

3 hours, first semester.

Professor Odell.

22. Browning.

The study of the poetry of Robert Browning.

2 hours, first semester.

Assistant Professor Cunningham.

French

Professor Bell

LOWER DIVISION COURSES

1. Elementary.

First semester: Thorough drill in fundamental rules of grammar with daily oral and written exercises. Reading short stories and conversation on text read.

Second semester: Drill on irregular verbs, idioms, elements of syntax. Reading of prose by modern authors. Easy composition. Special attention is given to acquiring a vocabulary. French being a living language, great attention is paid in this and the following courses to correct pronunciation and accentuation.

4 hours, throughout the year (8 units).

2. Modern Prose and Dramatic Writers.

First semester: General review of grammar, dictation in French, written and oral composition.

Reading: Short stories by modern authors, at least one modern play. Conversation based upon the texts read.

Second semester: Written and oral composition.

Reading: one or two modern plays, modern prose. Written resumé in French and practice in conversation.

Prerequisite, admission subject 21 or course 1.
3 hours, throughout the year (6 units).

UPPER DIVISION COURSES

3. **Composition and Classics.**

First semester: Advanced composition. Reading: prose by Sand, Balzac, Rostand and others. Themes and conversation on works read. Sight translation of prose. Classics by Moliere, Racine and others.

Second semester: Advanced composition. Reading: History of France, conducted in French, with written exercises on assigned topics.

Prerequisite, course 2.

3 hours, throughout the year, (6 units).

4. **History of French Literature.**

This course is intended to give the student ample practice in French conversation while affording a bird's-eye-view of what France has done and is doing in the world of thought. Outside reading of some of the works of certain authors, with written reports, will be required. Difficult composition and a review of grammatical principles will be given from time to time.

Prerequisite, course 3.

3 hours, throughout the year (6 units).

Geology and Mineralogy

Professor Eggleston

Assistant

1. General Geology, Dynamical and Structural.

Lectures and recitations.

Prerequisite, elementary courses in Physiography or General Science or Physics, in Chemistry, and in Botany or Zoology.

3 hours, first semester.

2. General Geology, Historical.

Lectures and recitations.

Prerequisite, course 1.

3 hours, second semester.

3. Field Geology.

This course involves a careful study of geological conditions in and around Highland Park, extending both to the mountains and to the sea; the drift, dip and strike of rock-strata and the various processes now at work to change the surface of the land. The work includes the construction of topographical maps of the region, plottings of the course and gradient of streams and sectional maps of the out-crop of strata in more specific cases. Students are required to present reports showing the results of their observations in the field, while photographs of field observations, lantern slides, maps, diagrams, etc., etc., are used extensively in class room work. This course to accompany course 1.

3 hours, first semester (1 unit).

4. General Paleontology.

The work of this course is conducted both in the field and laboratory, and is accompanied by occasional lectures and recitations. It involves a study and plotting of the different geological horizons; the development of life on the earth from its beginning to the present; the geological and geographical relationship of the various fossil forms, both of plants and animals, together with the characteristic and dominant species of the different divisions of geological time. Constant use is made of the College collection of fossils, while occasional excursions are made to fossil-bearing regions for the purpose of studying them as they occur in the earth. This course to accompany course 2.

3 hours, second semester (1 unit).

5. Mineralogy, Physical and Descriptive.

Lectures and laboratory. The course involves a study of elementary crystallography, the physical and chemical characters of minerals, a microscopical study of mineral sections and the descriptive study of typical minerals found in the College collection. It also involves a careful preparation of mineral and rock sections and the use of the polarizing microscope. The object is to familiarize the student with the common minerals about him and to enable him to recognize them on coming in contact with them in the field.

Prerequisite, elementary course in chemistry.

1 hour lecture and recitation and 3 hours laboratory, first semester (2 units).

6. Mineralogy, Determinative and Economic.

Lectures and laboratory. The lectures of this course involve a study of the origin, characteristics and distribution of metalliferous veins; the useful metals, their occurrence, relation to each other and the processes employed in obtaining them from their ores; as well as the occurrence, preparation and uses of numerous products of commercial importance, such as the common fuels, marbles, slates, clays, borax and salt. The time in the laboratory is devoted to the determination and classification of unknown mineral species, many of which are picked up by the student either on special excursions or in his daily walks.

Prerequisite, course 1 or its equivalent.

1 hour lecture and recitation and 3 hours laboratory, second semester (2 units).

The work in geology and mineralogy extends through the year, during which time special attention is given to the reading of current geological literature, while each semester a carefully prepared paper on some historical or economic subject is required of the student.

German

Professor Moll

LOWER DIVISION COURSES

1. Elementary German.

The essentials of grammar; drill in pronunciation; practice in speaking and writing German;

dictation and translation at hearing; reading at sight; reading of short, interesting stories.

4 hours, throughout the year (8 units).

2. Modern Prose and Poetry.

Selection from modern prose writers, poems and a drama from either Lessing or Schiller; composition and conversation.

Prerequisite, admission subject 18 or course 1.

3 hours, throughout the year (6 units).

UPPER DIVISION COURSES

3. The Classical Writers of the Eighteenth Century.

Dramas of Lessing, Schiller and Goethe; Lyrics and ballads of Schiller and Goethe. Composition and conversation.

Prerequisite, course 2.

3 hours, throughout the year (6 units).

5. The Drama of the Nineteenth Century.

Selected dramas of Kleist, Grillparzer, Hebbel, Hauptman, Suderman, and others. Advanced composition. To alternate with course 6. Omitted in 1913-1914.

Prerequisite, course 3.

3 hours, throughout the year (6 units).

6. The Novel of the Nineteenth Century.

Representative novels of Hauff, Freytag, Spielhagen, Heyse, Keller, and others. Advanced composition. To alternate with course 5. Given in 1913-1914.

Prerequisite, course 3.

3 hours, throughout the year (6 units).

Greek

Professor Ward

LOWER DIVISION COURSES

A. Elementary.

- (a) Beginning Book, Goodwin's Grammar.
- (b) Xenophon's Anabasis I.-IV. For those who enter without matriculation credit in the subject.
4 hours, throughout the year (8 units).

B. Lysias and Homer.

- (a) Easy selections from Lysias, or an equivalent.
- (b) Homer's Iliad I.-III. Metrics.
Prerequisite, admission subject 16 or course A.
3 hours, throughout the year (6 units).

3. Euripides.

- Iphigenia among the Taurians, and Alcestis. An introduction to Greek tragedy. Study of meters and the Greek stage.
Prerequisite, course B.
3 hours, first semester.

4. Thucydides, Demosthenes.

- Thucydides Book VII. Demosthenes, Philippics. Introduction to two important periods of Greek history. Collateral reading.
Prerequisite, course 3.
3 hours, second semester.

7. Greek Life and Literature.

- A course of lectures on Greek life and literature, supplemented by required reading and written

tests. A knowledge of Greek is desirable, but not required. Omitted in 1913-1914.

Open to all students.

2 hours, first semester.

8. Prose Composition.

Murray. For those preparing to teach Greek in the high schools of California, this course is essential. It should follow course 3.

1 hour, throughout the year (2 units).

UPPER DIVISION COURSES

Prerequisite, course 4. Two upper division courses are offered each year.

11. Plato.

Republic. Selections equivalent in amount to the Gorgias. A course valuable not only for students specializing in Greek, but for those pursuing ethics, sociology or education as well. The place of Plato in Greek philosophy.

3 hours, first semester.

12. Lyric Poets.

Selected. Development of the lyric. Lyric meters.

3 hours, second semester.

13. Herodotus.

Books VII. and VIII. Study of contemporary history. Stylistic and dialect study.

3 hours, first semester.

14. Aeschylus, Sophocles.

Aeschylus: Prometheus or Agamemnon. Sophocles: Oedipus the King or Antigone. The place of Aeschylus and Sophocles in the Greek drama.

3 hours, second semester.

15. Aristophanes.

Clouds, Frogs. Comparison of Greek comedy and tragedy. Comedy as a mirror of the times.

3 hours, first semester.

16. Odyssey.

First twelve books. Special study of Greek mythology. Literary influence of Homer.

3 hours, second semester.

History

Professor Cunningham

Associate Professor Cleland

LOWER DIVISION COURSES

1A. Outline History of Western Europe.

A survey of the history of Western Europe to the sixteenth century. Required for graduation.

3 hours, first semester.

1B. Outline History of Western Europe.

A survey of the history of Western Europe from the sixteenth to the twentieth century. Required for graduation.

3 hours, second semester.

2A. History of England.

A general view of the political history of England to 1603. Special study of English constitutional history.

Prerequisite, course 1.

3 hours, first semester.

2B. History of England.

A general view of the political history of England from the seventeenth to the twentieth cen-

ture. Special study of Imperial England.

Prerequisite, course 2A.

3 hours, second semester.

UPPER DIVISION COURSES

Courses 1 and 2 are prerequisite to all upper division courses in history.

3. History of Greece.

A study of the history of Greece in which special emphasis is laid on the ages of Pericles and Demosthenes. Omitted in 1913-1914.

3 hours, first semester.

4. History of Rome.

A general survey of the history of Rome to the fifth century. Omitted in 1913-1914.

3 hours, second semester.

5A. American History to 1800.

Early explorations and colonizations; the struggle for the continent. Colonial institutions: causes of separation from the mother country. The beginning of national life.

3 hours, first semester.

5B. American History from 1800.

A study of national development, with special reference to the influence of westward expansion upon American character and institutions.

3 hours, second semester.

6A. Modern European History.

A general survey of the history of Europe in the eighteenth century. Special study of the French Revolution and the Napoleonic era.

3 hours, first semester.

6B. Modern European History.

A general survey of the history of Europe in the nineteenth century. Special study of the development of nationalities.

3 hours, second semester.

History of Art

Professor Cunningham

Outline History of Art.

A general view of the development of architecture, sculpture and painting, from the earliest times to the present. Class study of lantern pictures. Individual collection of pictures of different periods.

3 hours, throughout the year.

Latin

Professor Ward

LOWER DIVISION COURSES**1. Livy.**

The larger portion of books XXI. and XXII. is read, with particular attention to the syntax and Livy's qualities as a writer and historian. Colateral reading on the history of the period.

Prerequisite, admission subjects 14 and 15.

3 hours, first semester.

2. Horace and Cicero.

Horace: Odes and Epodes. Cicero: De Amicitia or De Senectute. Lyric meters. Political conditions at the beginning of the empire.

Prerequisite, course 1.

3 hours, second semester.

3. Plautus and Terence.

Plautus: Captivi and Trinummus. Terence: Phormio. Meters, early forms and constructions, Roman and Greek life.

Prerequisite, course 2.

3 hours, first semester.

4. Tacitus and Pliny.

Tacitus: Agricola and Germania. Pliny the younger: selected letters. Investigation of social and political conditions under the empire.

Prerequisite, course 3.

3 hours, second semester.

5. Prose Composition I.

For those preparing to teach Latin in the high schools of California, this and the following course are essential.

Prerequisite, admission subject 15.

2 hours, first semester.

6. Prose Composition II.

Prerequisite, course 1.

2 hours, second semester.

8. Roman Life.

Lectures and assigned readings. No knowledge of Latin required. Omitted in 1913-1914.

Open to all.

2 hours, second semester.

UPPER DIVISION COURSES

Course 4 is the common prerequisite for all upper division courses in this department. Two of these are offered each year; 10 and 11 will be given in 1913-1914.

10. Horace and Juvenal.

Horace: Satires and Epistles. Juvenal: selected Satires.

3 hours, one semester.

11. Catullus, Tibullus and Propertius.

Selections. Influence of Alexandrinism. Roman morals. Literary coteries of the times.

3 hours, one semester.

12. Roman Comedy.

Plautus: Rudens and Mostellaria. Terence: Andria and Adelphi. Lectures on the Roman Drama.

3 hours, one semester.

15. Seneca.

Tragedies: Hercules Furens, Troades, Medea. Comparison with the masters of Greek tragedy, particularly Euripides. Seneca's handling of Greek meters and mythology.

3 hours, one semester.

16. Tacitus.

Selections from the Annals. Collateral studies in the history of the empire.

3 hours, one semester.

17. Lucretius.

De Rerum Natura: Books I., III. and V., with extended sight reading in the other three books. The Epicurean system and its poetic treatment at the hands of Lucretius.

3 hours, one semester.

Mathematics and Astronomy

Professor Allen

Mathematics

LOWER DIVISION COURSES

1. Solid Geometry.

The properties of straight lines and planes, of dihedral and polyhedral angles, of projections, of polyhedrons, including prisms, pyramids and the regular solids, of cylinders, cones and spheres, of spherical triangles, and the measurement of surfaces and solids.

Prerequisite, admission subjects 4 and 6.

3 hours, second semester.

2. Plane and Spherical Trigonometry.

The development of the general formulae of trigonometry. The theory and use of logarithms. The application of trigonometry to numerous problems in plane and spherical mensuration.

Prerequisite, admission subjects 4 and 6.

3 hours, one semester.

3. College Algebra.

This course includes the development and application of the binomial theorem and of the exponential and logarithmic series, permutations and combinations, and the theory of equations.

Prerequisite, admission subjects 4 and 6.

3 hours, first semester.

4. Plane Analytics.

A study of analytic methods, the analytic geometry of the straight line, the circle, and the conic sections, and investigation of the general equation of the second degree.

Prerequisite, admission subject 8 or course 2.

3 hours, second semester.

6. Surveying.

The department is equipped with a transit, Y level, Gunter's chain, steel tape, leveling rod, planimeter, slide rules, highly graduated protractor, parallel rules, etc. The principles of land surveying, irrigation, and railroad engineering will engage the attention of the class in actual field work, and the reduction of the field notes to plots drawn to scale.

Prerequisite, courses 1 and 2.

3 hours, second semester.

9. Differential Calculus.

The principles and formulae of differential calculus, and the application to such problems as maxima and minima, indeterminate forms, expansion of series, etc.

Prerequisite, courses 3 and 4.

3 hours, first semester.

UPPER DIVISION COURSES

The following will be ranked as Upper Division courses only when preceded by course 9. Physics 3 may be counted as an Upper Division course in Mathematics; also Astronomy 2, if preceded by Mathematics 9.

10. Integral Calculus.

The principles and formulae of integral calculus, with application to problems in integration, such as lengths of curves, areas, volumes, etc.

Prerequisite, course 9.

3 hours, second semester.

11. Theory of Equations.

The theory of determinants; the theory, analysis, and solution of higher numerical and algebraic equations.

Prerequisite, courses 2 and 3.

3 hours, first semester.

12. Higher Analytics.

A more advanced course than course 3, including a study of higher plane curves and the elements of solid analytic geometry.

Prerequisite, course 4.

3 hours, second semester.

Astronomy

1. General Astronomy.

A course in descriptive astronomy. Simple problems and questions, involving the fundamental principles of astronomy. Study of nebulae, planets, and constellations, with the telescope.

Prerequisite, admission subject 8 or Mathematics 2.

3 hours, first semester.

2. Practical Astronomy.

Lectures and observatory work. The determination of time, latitude, and longitude, and the computation of current eclipses and occultation of stars.

Prerequisite, admission subject 7, Mathematics 4, Astronomy 1.

3 hours, second semester.

Mechanical Drawing

Instructor Westcott

The courses offered will enable students preparing for engineering or scientific professions to obtain the necessary foundation work in drawing before taking up their specialized technical subjects. In certain cases special advanced work can be arranged for. The needs of students taking general courses have also been carefully considered. For those preparing for high school teaching, a course of lectures and reading to accompany the regular work can be arranged, for which additional credit will be allowed at the discretion of the Instructor.

Work in courses 3 and 6 must begin with the first semester, in the others with either. In courses designated A and B, credit is allowed for each half year.

1. Instrumental Drawing.

A. Linear drawing, freehand lettering, geometrical problems and constructions, mathematical curves.

B. Mathematical curves continued, elementary principles of projection in the third quadrant, helical curves. Applied projection.

Open to all students.

3 hours, throughout the year (2 units).

2. Orthographic Projection.

Problems in projection, intersection of solids, development of surfaces. Application of the foregoing principles to working drawings, isometric projection, shop sketching. This course is suitable for those who desire a working knowledge of mechanical drawing but who may not find it desirable to take the more extended course in Descriptive Geometry.

Prerequisite, course 1.

3 hours, throughout the year (2 units).

3. Descriptive Geometry.

A. Basic principles, problems on point, line and plane, curved surfaces, sections, intersections.

B. Shades, shadows and perspective.

The course involves the study and discussion of the elements of drawing from the theoretical side. This subject is a requirement in all architectural and engineering courses. From one to three hours per week are devoted to recitation or lectures, the balance to work at the drawing board.

Prerequisite, course 1 and Mathematics 1.

6 hours, throughout the year (6 units).

4. Machine Drawing.

Machine details, bolts and nuts, screw threads, machine movements, cam, lever and link, spur and bevel gears. Complete shop drawings of machines, assembly drawings, tracings, blue prints, titles.

Prerequisite, course 2 or 3.

3 hours, throughout the year (2 units).

5. Architectural Drawing.

A course familiarizing the student with the technical terms used in architectural practice and building construction, the principles of plan drawing and detail. The work may be varied to suit the special needs of the student, the object being to provide a thorough foundation of elementary knowledge in the subject upon which to base advanced work. The class-room work is supplemented by lectures on drafting room practice, visits to the office of some architect and the inspection of buildings under construction.

Prerequisite, course 2 or 3.

4 hours, throughout the year (4 units).

6. Statics—Graphic and Algebraic.

The analysis of statical problems by both graphic and algebraic methods, showing the relation of the two and their relative advantages and disadvantages. The problems advance from simple forms of composition and resolution of forces to the complex application of those principles in the determination of strains in frames such as

bridge and roof trusses in their various forms, girders, the cantilever, etc.

Prerequisite, course 1 and Mathematics 2.

3 hours, throughout the year (2 units).

Philosophy

Professor Burt

1. Psychology.

Psychology, descriptive and explanatory. A study of the most general and elementary forms of consciousness. Ladd or equivalent is used as a text. Required for graduation.

Prerequisite, Sophomore standing.

3 hours, second semester.

2. Logic.

The principles of Deductive and Inductive Logic are studied and applied in practical work. The purpose is so to familiarize the student with the laws of thought that they may be of practical value. Required for graduation.

Prerequisite, course 1.

3 hours, first semester.

3. Ethics.

The history of ethical theory; its importance; the basis for moral obligation and the resultant duties to God and man. Mackenzie or equivalent is used as a text.

Prerequisite, courses 1 and 2.

3 hours, second semester.

4A. History of Ancient Philosophy.

An examination of the thought of the Greek period with special emphasis upon the systems of Plato and Aristotle. Junior-Senior elective. Omitted in 1913-1914.

3 hours, one semester.

4B. History of Modern Philosophy.

An examination of the principal systems of modern thought from Bruno to the present day. Junior-Senior elective.

3 hours, first semester.

5. Theism.

A study of the theistic arguments together with an examination of the anti-theistic theories.

Prerequisite, courses 1, 2.

3 hours, second semester.

6. Comparative Religions.

A study of the great religions of the world, emphasizing the divine origin and transcendent value of Christianity as the only religion for the world.

Prerequisite, Sophomore Standing.

2 hours, first semester.

Physical Training

Joseph A. Pipal, Director

Mrs. Joseph A. Pipal, Director for Women

The work in this department is required of all Freshman and Sophomores not excused on account of physical disability. On entering college each student is given a thorough physical examination,

which forms the basis for special prescriptive work. Students having organic heart trouble or any other weakness which makes it dangerous for them to indulge in vigorous exercise are not allowed to participate in athletic competition or heavy gymnastics.

The course is graded—elementary, intermediate and advanced—thus offering a change of work each year. Under the supervision of the director, students may elect out-of-door athletics in place of indoor gymnastics.

1. Freshman.

(I) For men. Elementary calisthenics, marching tactics and preliminary work in heavy gymnastics. Both indoor and outdoor games.

(II) For Women. Elementary gymnastics, free hand movements, light apparatus, tactics, fancy steps and gymnastic games.

2 hours, throughout the year (2 units).

2. Sophomore.

(I) For Men. Intermediate and advanced gymnastics, wand and dumb-bell drills, tumbling, indoor and outdoor games, advanced tactics.

(II) For Women. Intermediate and advanced gymnastics, light and heavy apparatus, tactics, fancy steps and gymnastic games.

2 hours, throughout the year (2 units).

Physics

Professor Wolfe

Assistant William Annin.

LOWER DIVISION COURSES

1. General Physics.

A systematic development of the fundamental ideas and principles of physics is the aim of this course. The lectures include both elementary mathematical treatments and full experimental demonstrations.

Kimball's College Physics, supplemented by Sabine's Laboratory Manual, is used as a textbook. The laboratory work consists in the measurements with standard instruments of such physical quantities as moments of inertia, g (two methods), surface tension, density, elasticity; pitch and speed of sound; specific heat, mechanical equivalent of heat; electro-magnetic, electro-chemical, and electro-thermal equivalents, intensity of the earth's field and magnetic moment; optical constants of lenses and mirrors, indices of refraction, and wave lengths of light.

N. B.—Two extra lectures per week and one extra laboratory period per week will be required of those who have not had high school Physics. This extra work may be counted for the removal of an entrance condition but not toward graduation.

Prerequisite, admission subject 8.

3 hours of lectures and recitations and one three-hour laboratory period, throughout the year (8 units).

2A. Optical Measurements.

In this course the theories of geometrical and physical optics are developed, and are verified by exact measurements in the laboratory. Edser's "Light" is the text-book. The optical laboratory is equipped with a spectrometer, a Pulfrich refractometer, a Michelson interferometer, a Lummer-Brodhun photometer, a saccharimeter, and optical benches with apparatus for work in diffraction and in polarized light.

Prerequisite, course 1. Mathematics 9 must precede or accompany.

3 hours of lectures and recitations and 1 three-hour laboratory period, first semester (4 units).

UPPER DIVISION COURSES

2B. Electrical Measurements.

The laboratory work of this course includes a measurement of resistance in absolute units by Lorenz's method; comparison of resistances by various forms of the Wheatstone bridge, viz.: Carey Foster's, Kohlrausch's, Hartmann and Braun's, and Thomson's; the calibration of a ballistic galvanometer; measurement of capacity by the ballistic galvanometer; measurements of self-inductance and of mutual inductance; measurements on alternating-current circuits containing capacity and inductance. The lectures deal with the theory of the methods employed and with industrial applications. Hadley's "Magnetism and Electricity" is the text book.

Prerequisite, course 2A and Mathematics 9.
Mathematics 10 must precede or accompany.
3 hours of lectures and recitations and 1 three-hour laboratory period, second semester (4 units).

3. Analytical Mechanics.

This course gives a comprehensive survey of both statics and dynamics, following Hoskin's "Theoretical Mechanics." It is intended for Juniors who have taken calculus, but Sophomores who are taking calculus at the same time may be admitted by consent of the instructor.

Prerequisite, course 1, with Mathematics 9 and 10 completed or in progress.

5 hours of lectures and recitations, throughout the year (10 units).

4A. Thermodynamics.

The relations between heat and other forms of energy are discussed in this course. Instruction will be by lectures and prescribed reading. Omitted in 1913-1914.

Prerequisite, course 1 and Mathematics 9 and 10.

3 hours, first semester.

4B. The Electron Theory.

The last few years have witnessed discoveries which are rapidly leading to a unitary view of the whole subject of electricity, under the name of the "Electron Theory." These discoveries are taken up and interpreted in this course. The

lectures will be supplemented by outside reading.
Omitted in 1913-1914.

Prerequisite, courses 1 and 2, and Mathematics
9 and 10.

3 hours, second semester.

Sociology

Professor Stevenson

All courses in Sociology are elective. They are open to any student who can meet the restrictions as to prerequisites.

LOWER DIVISION COURSES

1. Elementary Sociology.

A general survey of the facts of society preparatory to the critical study of social theory in course 2. The textbook will be supplemented by lectures and readings and by lantern slides that illustrate social classes, customs and institutions and the physical basis of society.

Open to all upper classmen and to lower-division students upon consultation with the professor.

3 hours, first semester.

UPPER DIVISION COURSES

2. Principles of Sociology.

An introduction to the theory of society. The various conceptions of Sociology; its relation to other social sciences; its special problems and the laws that govern their solution; and incidental discussion of social conditions to establish and to illustrate social theory.

Prerequisite, a year of Economics or equivalent preparation.

3 hours, first semester.

3. Social Psychology.

The nature, formation and manifestations of the social mind, and its reaction upon the individual mind and conduct. Illustrations of phases of the social mind will be sought in contemporary society, and an effort made to interpret them in terms of psychological principles.

Prerequisite, Philosophy 1 and Sociology 1 or 2.

3 hours, second semester.

4. Social Pathology.

A general study of the weaknesses and diseases of society, and the application of sociological principles to charity, criminology, and constructive social work. Los Angeles offers ample opportunity for field work in the many conditions and institutions that illustrate nearly every phase of social health and social disease.

Prerequisite, course 2.

3 hours, second semester.

5. Charities and Corrections.

A critical study of selected subjects treated less fully in course 4: preferably, the origin, nature, and treatment of the defective, dependent, and delinquent classes, and an intensive study of specific problems in criminology or in preventive philanthropy.

Prerequisite, course 2.

2 hours, one semester.

6. Immigration.

A discussion of the principles which determine all migrations, with special attention to the American immigration problem and its relation to social, industrial, and political conditions on the Pacific coast. To alternate with course 5.

Prerequisite, course 2.

2 hours, one semester.

Spanish

Professor Bell

1. Elementary.

Hills and Ford's Spanish Grammar. Reading of short and easy stories and plays. Doce Cuentos Escogidos; Alarcón, El Capitán Veneno; Valera, El Pájaro Verde; Galdós, Marianela. Composition and conversation.

4 hours, throughout the year (8 units).

2. The Modern Novel and Drama.

Galdós, Doña Perfecta; Valdés, La Hermana San Sulpicio; Valera, El Comendador Mendoza; Pereda, Pedro Sánchez; Echegaray, El Gran Galeoto. Advanced grammar and composition.

Prerequisite, admission subject 24 or course 1.

3 hours, throughout the year (6 units).

3. Conversation and Composition.

This course is conducted mainly in Spanish. Current events and some of the best modern novels and dramas will be read and discussed. An opportunity will be given to the students of coming in contact with educated Mexicans who

do not know English. This will afford ample opportunity of hearing the Castilian spoken without any attempt at avoiding idioms. Reviews of important points of grammar and written composition will be given as needed.

Prerequisite, course 2.

3 hours, throughout the year (6 units).

Schedule of Lectures and Recitations

The names and numbers of courses correspond with those found under "Departments of Instruction," pages 41 to 87, the added Roman numerals referring to sections of classes.

Recitation periods are indicated by figures, in the vertical columns, as follows:

- 1 begins at 8:30 a.m.
- 2 begins at 9:25 a.m.
- 3 begins at 10:20 a.m.
- 4 begins at 11:35 a.m.
- 5 begins at 1:10 p.m.
- 6 begins at 2:05 p.m.

L means a laboratory period, which begins at 1:10 p.m. and ends at 4.

Courses not scheduled will have their hours arranged when the classes are formed.

Chapel exercises are held daily at 11:15 a.m.

First Semester

Second Semester

M	T	W	T	F		M	T	W	T	F
1		1		1	... Astronomy 1.....					
					... Astronomy 2.....					
	3			2	... Biblical Lit. 1 I...					
	5	5			... Biblical Lit. 1 II..					
4			4		... Biblical Lit. 1 III					
					... Biblical Lit. 2 I...	3		3		
					... Biblical Lit. 2 II..			1		3
					... Biblical Lit. 3....		2		2	
3		3			... Biblical Lit. 4....					
					... Biblical Lit. 8....				5	5
			5	5	... Biblical Lit. 12...					
					... Biblical Lit. 14...	4		4		
L	3		L		... Botany 1.....					
					... Botany 2.....	L	3		L	2
			L		... Botany 3.....		2			L
3		1		3	... Chemistry 1 I....	3		1		3
3		3		3	... Chemistry 1 II...	3		3		3
			L		... Chemistry 2.....				L	
		L	L		... Chemistry 3.....			L	L	
L			L	L	... Chemistry 4.....	L			L	L
L			L	L	... Chemistry 5.....	L			L	L
1	1		1	1	... Chemistry 6.....					
L					... Chemistry 7.....	L				
					... Chemistry 8 or 9..	1	1		1	1

First Semester					Second Semester					
M	T	W	T	F		M	T	W	T	F
L			L	L	... Chemistry 10.....	L			L	L
					... Drawing 1.....					
					... Drawing 2.....					
L			L		... Drawing 3.....	L			L	
					... Drawing 4.....					
					... Drawing 5.....					
					... Drawing 6.....					
	3		3	2	... Economics 1....		3		3	2
4		4	4		... Economics 2....					
					... Economics 3....	4		4	4	
2	2		2		... Economics 4....					
	2	L	2		... Economics 5....		2	L	2	
3		3		3	... Economics 10....	3		3		3
					... Economics 11....	2	2		2	
	2		2		... Economics 12....		2		2	
3		3		3	... Economics 13....					
					... Economics 14....	3		3		3
5			5	5	... Economics 15....					
					... Economics 16....	5			5	5
1		1		1	... Education 1.....					
					... Education 4.....	1		1		1
					... English A.....					
2		2			... English 1 I.....	2		2		
	2		2		... English 1 II.....		2		2	
3		3			... English 2 I.....					
		1		3	... English 2 II.....					
					... English 3.....		5			6
4		4	4		... English 6 I.....					
	3		3	2	... English 6 II.....					
					... English 7 I.....	4		4	4	
					... English 7 II.....		3		3	2

SCHEDULE

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First Semester

Second Semester

M	T	W	T	F		M	T	W	T	F
6		5			... English 8					
					... English 9	6		5		
4		4	4		... English 11					
					... English 12	4		4	4	
					... English 14				5	5
					... English 16		3		3	2
	6	6	6		... English 19	6	6	6		
					... English 20	3		3		3
2	2		2		... English 21					
	5	5			... English 22					
1	1		1	1	... French 1	1	1		1	1
4		4	4		... French 2	4		4	4	
	5	5		6	... French 3		5	5		6
	6	6	6		... French 4		6	6	6	
3		3		3	... Geology 1					
					... Geology 2	3		3		3
		L			... Geology 3					
					... Geology 4			L		
	L	2			... Geology 5					
					... Geology 6		L	2		
1	1		1	1	... German 1	1	1		1	1
	3		3	2	... German 2		3		3	2
	6	6	6		... German 3		6	6	6	
	5	5		6	... German 6		5	5		6
1	1		1	1	... Greek A	1	1		1	1
5			5	5	... Greek B	5			5	5
4		4	4		... Greek 3					
					... Greek 4	4		4	4	
		1			... Greek 8			1		
	6	6	6		... Greek 13					
					... Greek 14		6	6	6	

First Semester					Second Semester					
M	T	W	T	F		M	T	W	T	F
3		3		3	...History 1 I.....	3		3		3
5			5	5	...History 1 II.....	5			5	5
4		4	4		...History 2.....	4		4	4	
	3		3	2	...History 5.....		3		3	2
5			5	5	...History 6.....	5			5	5
2	2		2		...History of Art....	2	2		2	
3		3		3	...Latin 1.....					
					...Latin 2.....	3		3		3
2	2		2		...Latin 3.....					
					...Latin 4.....	2	2		2	
	3		3		...Latin 5.....					
					...Latin 6.....		3		3	
	5	5		6	...Latin 7.....					
					...Latin 11.....		5	5		6
					...Mathematics 1...	3		3		3
3		3		3	...Mathematics 2 I..					
2	2		2		...Mathematics 2 II					
4		4	4		...Mathematics 3...					
					...Mathematics 4...	4		4	4	
					...Mathematics 6...	1		1		1
	3		3	2	...Mathematics 9...					
					...Mathematics 10..		3		3	2
2	2		2		...Mathematics 11..					
					...Mathematics 12..	2	2		2	
					...Philosophy 1.....		1	2	1	
2	2		2		...Philosophy 2.....					
					...Philosophy 3.....	2	2		2	
	3		3	2	...Philosophy 4B....					
					...Philosophy 5.....	1		1		1
		1		1	...Philosophy 6.....					

SCHEDULE

93

First Semester

Second Semester

M	T	W	T	F		M	T	W	T	F
	2		2		... Phys. Train. 1 I..		2		2	
2		2			... Phys. Train. 1 II	2		2		
		1		3	... Phys. Train. 2 I..			1		3
3		3			... Phys. Train. 2 II	3		3		
L	3		3	2	... Physics 1.....	L	3		3	2
4		4	4		} ... Physics 2..... {	4		4	4	
		L						L		
1	1	1	1	1	... Physics 3.....	1	1	1	1	1
	3		3	2	... Sociology 1.....					
3		3		3	... Sociology 2.....				3	
					... Sociology 3.....		3			2
					... Sociology 4.....	3		3		3
2	2	2	2		... Spanish 1.....	2	2	2	2	
4		4	4		... Spanish 2.....	4		4	4	
3		3		3	... Spanish 3.....	3		3		3
1			1	1	... Zoology 1.....	1			1	1
	L	L			... Zoology 2.....					
					... Zoology 3.....		L	L		
3	L	L		3	... Zoology 4.....					
					} ... Zoology 5..... {	3		3		3
						L	L	L		
					... Zoology 7.....				L	
	3		3	2	... Zoology 8.....					

General Information

REGISTRATION AND CLASS STANDING

Registration. Every student is expected to register before or during the appointed registration days of each semester. Any one registering later than the first Friday of the semester will be charged a registration fee of two dollars. All college bills for the semester are to be settled or arranged for at the time of registration. A certificate of registration, signed by the Registrar and Business Manager, must be presented to the instructor of each class in which the student seeks to be enrolled. No one will receive credit for a course for which he has not been officially registered.

Twelve semester hours is the minimum, and eighteen semester hours in addition to Physical Training the maximum for which a student may register. The semester hour is understood to mean one hour in the classroom per week continued through a semester, or three hours (ordinarily) in the laboratory.

Classification. The class in which a student is to be ranked is determined by the following scale of credits, each figure being the minimum for conditioned standing in the class named:

Freshman— $13\frac{1}{2}$ units of accepted high school credit.

Sophomore—26 units (net) of college credit.

Junior—60 college units, all entrance conditions removed.

Senior—94 college units, all entrance conditions removed.

Marking System. Five passing grades of scholarship are in use, represented by Arabic numerals, as follows: 1 represents the first or maximum grade; 2, the second grade; 3, the third or medium grade, which is the grade of the average student; 4, the fourth grade; 5, the fifth, or minimum passing grade.

Ordinarily, in required Lower Division work, these grades should be distributed about as follows: grades 1 and 5, five per cent each; grades 2 and 4, twenty per cent each; grade 3, fifty per cent. "inc." represents incomplete work; "con." represents a condition, to be removed by examination; F represents a failure, to be removed only by repetition of the course.

While 5 is a passing grade in any subject, yet for class promotion and for graduation the student is required to maintain an average of 3.5 in the necessary number of units. The average maintained by each student will be indicated in his semester reports and become a part of the permanent scholarship records.

The method of finding this average is to multiply the grade obtained in each subject by the number of units with which the subject is credited, add the products, then divide their sum by the total number of units earned in all subjects combined.

Subjects passed with a grade of 5 will not be recommended for credit in transferring to other institutions.

The head of any department may exclude from advanced classes a student, who, in his judgment, has failed to do satisfactory work in the lower classes.

Class Honors. First Honors are awarded on commencement day to those members of each of the four classes whose average grade for the year equals 1.3; Second Honors to those whose average equals 2.

To be eligible to these honors, one must have at the end of the year:

- a. All entrance conditions removed.
- b. No failures or unremoved conditions on the year's record.
- c. At least 24 units of college credit earned during the year.
- d. Rank in the next class.

Final Honors. On the same basis as above, Final Honors are awarded to those members of the graduating class who have won Class Honors each of the four years of their course, or whose average for the four years equals the average required for class honors. Students from other institutions entering Occidental not later than the beginning of the Junior year will be eligible to Final Honors, provided, in the judgment of the Committee on Classification, their record for the preceding part of their course equals the standard named above.

Valedictory and Salutatory. The rank of Valedictorian is awarded to that member of each graduating class who stands highest in scholarship average for the entire course.

The rank of Salutatorian is awarded to that member of each graduating class who stands second in scholarship average for the entire course.

Students from other institutions entering Occidental later than the beginning of the Junior year are not eligible to these honors.

ATTENDANCE

The College requires of all students regular attendance at the chapel service and at all the classes to which they belong. A copy of the rules governing attendance may be obtained from the Dean.

REGULATIONS GOVERNING SOCIAL LIFE

The College provides places of residence for the students by means of a system of registered lodgings and boarding places. All students must room in places approved by the Faculty. Students are required to keep reasonable hours and to conduct themselves with propriety at all times. A copy of the rules governing the social life of the College may be obtained from the Dean.

PHYSICAL TRAINING AND ATHLETICS

The body being the physical basis of mind and soul should be made a fit instrument of their work. This can best be accomplished by a wisely prescribed course of training. Through such a course the human organism reaches the highest stage of structural and functional efficiency, and greater mental and moral efficiency naturally follows. The work of the department of Physical Training, both in gymnastics and in athletics, is always made subordinate to this larger purpose of the institution. It is regarded as a means and not an end.

The gymnasium is a large well-lighted and well-ventilated room connected with the men's dormitory. It contains indoor baseball and basketball courts

and is equipped with traveling and flying rings, horizontal and parallel bars, vaulting horse, floor mats, medicine balls, Indian clubs, wands, dumb bells, punching bags and other apparatus needed for systematic body building. Near by are lockers, with dressing rooms, and shower baths supplied with both hot and cold water. A large enclosed court is used by the young women for games, such as basketball, volley ball and hand ball. Adjoining this court is the young women's dressing and locker rooms, in which are five showers supplied with hot and cold water. Three well-kept tennis courts are open to all students. The athletic field, contains a standard quarter-mile track, with football, baseball and basketball fields. The field house is conveniently located on the edge of the field and contains a large supply of lockers, dressing rooms and baths.

Athletics as a phase of the general college life are under the care of the Associated Students, acting in co-operation with the Faculty Athletic Committee. Athletics as affecting the health of the individual are controlled by the Physical Director.

THE FRIDAY ASSEMBLY

The Friday Assembly is a feature of Occidental life scarcely matched anywhere else among the colleges of America. At this assembly vital topics are discussed by eminent men and women from all parts of the world. No lecture course east or west provides its patrons a richer or more varied program than that offered to the students of Occidental every week in the year, free of charge, from their

own chapel platform. Its value as part of a college education can hardly be estimated. The following are a few names, among many, of those who have given addresses the past year: Dr. Robert J. Burdette, Dr. Charles M. Sheldon, Dr. Mark A. Matthews, Prof. Francis G. Peabody, Secretary William Shaw, Mr. George W. Perkins, Prof. Henry van Dyke, Hon. John W. Foster, Dr. Shailer Matthews, Miss Zona Gale, Dr. John Balcom Shaw.

HIGH SCHOOL CERTIFICATE

Graduates of Occidental College may obtain the high school teacher's certificate for California on the same conditions as graduates of the State University. Full details regarding these conditions will be furnished on application.

COLLEGE BILLS

General

Tuition, each semester.....	\$50.00
Graduation Fee.....	5.00

Laboratory

Botany 1 or 2.....	\$ 3.00
Botany 3, each semester.....	1.50
Chemistry 2 or 7, each semester.....	5.00
Chemistry 3, each semester.....	10.00
Chemistry 4, 5 or 10.....	10.00
Geology 5 or 6.....	1.50
Physics 1, each semester.....	6.00
Physics 2A or 2B.....	3.00
Zoology 2 or 3.....	4.00
Zoology 5 or 6.....	5.00

In addition, a breakage deposit of \$5.00 is required for each laboratory course in Chemistry. The balance remaining at the end of the course will be returned.

All college bills are payable in advance. Five per cent will be added to all bills of the first semester not paid by November 15th, and to those of the second semester not paid by March 15th.

No payments will be refunded for students who are dismissed or suspended or who leave College for any reason other than illness necessitating absence for more than half a semester. Not more than half the proportionate charges for such a period of absence will be refunded.

LIVING EXPENSES

A system of registered lodging and boarding places provides places of residence for the students at a cost varying from eighteen to twenty-five dollars per month. New students will be provided on their arrival with complete lists of approved rooms and boarding places.

Applications for rooms in the men's dormitory may be sent to the Registrar, Occidental College.

The necessary expenses of the student range from \$275 to \$400.

Students who desire to earn their expenses while attending the College should register with the Employment Bureau conducted by the Christian Associations. Opportunities for self support among the students are somewhat limited. The number of stu-

dents who earn their entire expenses is comparatively small.

SCHOLARSHIPS

The College has a limited number of scholarships available for the relief of deserving students who are unable to pay tuition. In some cases the beneficiary is named by the donor, in others by the President or Board of Trustees. Every candidate for a scholarship must have his application indorsed by some person of recognized standing in his home neighborhood. Any one receiving such aid will be expected to maintain a creditable standing in his classes and to show by his conduct that the assistance has been worthily bestowed. Address all communications regarding these scholarships to the President.

THE HORACE CLELAND SCHOLARSHIP

In addition to those named above, the Horace Cleland Scholarship, recently established by the Alumni Association, is awarded, for the Sophomore year only, to that member of each class who seems best entitled to it on the general basis of need and merit.

THE CECIL RHODES SCHOLARSHIPS

Competition for these is open to the young men of Occidental. One who passes the qualifying examination held in Los Angeles becomes eligible to appointment for a term of three years as Rhodes Scholar at Oxford, England, an expense fund of \$1500 a year being provided.

STUDENT LOAN FUND

There is a loan fund from which a worthy student in unusual need may borrow at four per cent interest a sufficient amount to meet a part or all of his tuition, giving his personal note as security. Such loans can be made only in case of real need and through personal conference with the President. Each applicant must furnish satisfactory references and will be expected to maintain a proper standard of scholarship and conduct.

HONORS AWARDED IN 1912

CLASS HONORS

First Freshman:

Florence Margaret Moote
Lola M. Van Ness

Second Freshman:

Pearl Margaret Adams
Harold Parker Huntington
Helen Hamilton Manley
Helena Theresa McKelvey
Andrew Wilson Stewart
George Webber Thorne

First Sophomore:

Louise Baxter Boal
Frederick Walton Brown
Charles Elvon Musick
Hettie Alice Withey

Second Sophomore:

Edith May Hazlett
Clara Gertrude Herman
Mary Lois Leffingwell
William Orr McConnell
Eva Pearl Osborn
Anna Almeda Pettit
Evelyn Board Raynold

First Junior:

Dorothy Culp

Second Junior:

Stella Freeman
Nora Allen Nelson
William Bush Percival, Jr.
William Sharp Thorndike

First Senior:

Rosalind Joleva Chase
William Wilson Cumberland
Charlotte Victoria Donaldson

Second Senior:

Georgia McKenzie Brack
Bessie Margery Gardner
Harold Brooks Landreth
Edith Griffith Osmond
Carolyn Walton Pettit
James Farmer Pleukharp
Esther Annette Post
Celia Elliott Tucker

FINAL HONORS

First:

Rosalind Joleva Chase
William Wilson Cumberland
Charlotte Victoria Donaldson

Second:

Georgia McKenzie Brack
Warren Rippey Schoonover

VALEDICTORY AND SALUTATORY

Valedictory:

Charlotte Victoria Donaldson

Salutatory:

William Wilson Cumberland

ORATORICAL AND DEBATING CONTESTS

Intercollegiate Oratorical Contest. An oratorical contest between the colleges of Southern California is held annually. The preliminary contest at Occidental is under the direction of the Associated Students. The winner in this contest represents Occidental in the Intercollegiate. In the last home contest, the first prize was won by Mr. Christopher Gaskell, '13, and the second by Mr. Day Ehrenfeld, '14.

Prohibition Oratorical Contest. Each year an oratorical contest is held under the auspices of the Students' Prohibition League, which is a branch of the Intercollegiate Prohibition Association. The subjects discussed are connected with the work of temperance reform. Two prizes, of \$15 and \$10,

respectively, are offered to the winners of this contest by the Temperance Committee of the General Assembly of the Presbyterian Church in the U.S.A. In this year's contest the first prize was awarded to Mr. John Bickford, '14, and the second to Mr. Day Ehrenfeld, '14.

The Southern California Peace Society. An oratorical contest is held annually under the auspices of the Southern California Peace Society. The aim of the society is to bring about international disarmament. The local contest is under the direct charge of the student Oratorical Association, and the winner represents the college in the Intercollegiate Peace Oratorical Contest of Southern California. At the home contest, occurring April 28, the first prize was awarded to Mr. Willis La Mott, '15, and the second to Mr. Day Ehrenfeld, '14.

The Triangle Debate. The "Triangle Debate," between representatives of Occidental College, Pomona College and the University of Southern California, has become an annual affair. Three debates on the same question take place simultaneously. Each institution is represented by six debaters, three of whom support the affirmative in the home contest, the remaining three supporting the negative at one of the other institutions. In the debate with Pomona, this year, Occidental was represented by Millard Mier, '16, Willis La Mott, '15, Edwin Hullinger, '15; in the debate with the University of Southern California, by George Blount, '13, Harry McClean, '15, John Jay Hopkins, '15.

Debate with Redlands University. For two years in succession a debate has been held between

representatives of Occidental College and Redlands University, each team being made up of two young men. In the debate of the first year, Occidental was represented by William Percival, '14, and Maynard Hanna, '16. In the second debate, held the past year, Occidental was represented by William Pollard, '16, and Paul Steintorf, '16.

The Debating Record. Occidental has taken part in one intercollegiate debate besides those with the colleges and universities named above. While no special attention has been given to this form of activity, the record has been quite creditable. Out of the fifteen debates participated in, Occidental has won nine, and, taking one year with another, has been defeated by no institution thus far.

STUDENT ORGANIZATIONS

The Associated Students. The purpose of this organization is to control all student enterprises. All Occidental students are eligible to membership. At its organization, the Associated Students absorbed the Athletic Association, the Oratorical Association, and the Occidental Publishing Company. These enterprises are now under the direct control of a General Manager and under the general control of an Executive Committee, which is composed of the officers of the Association, the General Manager, and one representative of each of the following interests: Oratory, Athletics, Student Publications, the Alumni, and the Faculty.

All expenditures must be authorized by the Executive Committee; and every month a report of

receipts and expenditures, after being duly audited, is published in *The Occidental*.

Christian Associations. The Young Men's and the Young Women's Christian Associations are both represented by strong organizations, being supported by a large majority of the students. The weekly meetings of the Associations are largely attended. Classes for systematic Bible study meet regularly.

Interest in missions is very strong, the Student Volunteer movement being well represented in both Associations.

Each year the Y. M. C. A. sends a delegation to the State conference at Pacific Grove, and the Y. W. C. A. a delegation to Moss Beach.

An important feature of the work of the Associations is the Student Employment Bureau, which is conducted for the benefit of those desiring to earn their expenses during the college year. An Information Bureau is also conducted by the Association for the assistance of new students at the opening of the college year.

Literary Societies. The students of the College support three active literary societies: the Stevenson and the Lowell, composed of young men, and the Laurean, composed of young women. These societies hold weekly meetings for debating and other literary work.

Glee Club. The Glee Club continues to maintain its place among the successful organizations of the College. Besides furnishing the music at various services and exercises of the College, the club regu-

larly makes a vacation trip to a number of the surrounding towns. It contributes in no small degree to the social life of its members and to the musical interests of the College.

Membership is based upon ability displayed in competitive trials at the opening of the school year.

STUDENT PUBLICATIONS

The Occidental, the College newspaper, appears twice each week of the College year. It is edited and managed by students of the College. An annual, La Encina, is published in May by the Junior class. A handbook of information is issued at the beginning of each year by the Y. M. C. A.

FORM OF BEQUEST

Those intending to devise property to Occidental College are requested to use the following form: "I hereby give, devise and bequeath unto the Occidental College of Los Angeles, State of California, the sum of _____Dollars."

For property other than money the form should be correspondingly varied.

Executive Committee of the Associated Students 1912-1913

President.....	Drury P. Wieman, '13
Vice-President.....	Mary H. Allen, '13
Secretary.....	Mary C. Culbertson, '13
General Manager.....	Francis W. Lawson, '12
Alumni Representative.....	Arthur L. Spring, '08
Editor of "The Occidental".....	C. H. Gaskell, '13
Athletic Representative.....	David B. Dill, '13
Oratorical Representative.....	John T. Bickford, '14
Faculty Representative.....	Professor Ward

Officers of the Alumni Association 1912-1913

President,

Rev. Edward Dwight Chapin, '08

Vice-President,

Bertha Boal, '08

Secretary,

Mrs. Mary Reiner McClung, '11

Treasurer,

Harry C. Dane, '02,

1959 West Washington Street,

Los Angeles, Cal.

Alumni Representative,

Executive Committee Associated Students,

Arthur Logan Spring, '08

Alumni Editor of "The Occidental,"

Edna Louise Chamberlin, '11

Graduate Council

Term expiring June, 1913:

Dr. Isabel Crowell, '02
Edward Solomon, '03
Daniel S. Hammack, '05
Edna Louise Chamberlin, '11
Philip F. Dodson, '10

Term expiring June, 1914:

Dr. Arthur W. Buell, '04
Margaret Herskovits, '05
Arthur L. Spring, '08
Prof. Arthur G. Paul, '09
Frank N. Rush, '09

Term expiring June, 1915:

Rev. Edward Dwight Chapin, '08
Bertha Boal, '08
Francis William Lawson, '12
Mrs. Mary Reiner McClung, '11
Prof. Robert Glass Cleland, '07

Degrees Conferred in 1912

Doctor of Laws

Hugh Kelso Walker, D. D.

Bachelor of Arts

Edwin Abbey Bishop
Leslie Logue Boyd
Georgia McKenzie Brack
Grace Edith Brown
Rosalind Joleva Chase
Roy Lamont Creighton
William Wilson Cumberland
Charlotte Victoria Donaldson
Charles Morris Fuller
Bessie Margery Gardner
Rebecca Hayslip
Warner Harrington Hollister
Fred McPherson Johnson
Harold Brooks Landreth
Francis William Lawson
Robert David McGee
Edith Griffith Osmond
Carolyn Walton Pettit
Esther Annette Post
Aileen Riggins
Benjamin Rey Schauer
Alice Marion Truesdell
Celia Elliott Tucker
Anna Louise Tuller
Grace Adelaide Vickers

Bachelor of Science

Helen Faye Fifield

James Farmer Pleukharp

Warren Rippey Schoonover

James Patterson Smart

Bertha Elvira Stanley

Register of Students

1912-1913

SENIORS

Allen, Mary Harriet.....	Los Angeles
Angus, Howard Weldon.....	Arcadia
Blount, George Winfield.....	Los Angeles
Bradbeer, Chester Boal.....	Los Angeles
Brier, Edward Blake.....	Los Angeles
Culbertson, Mary Coe.....	Los Angeles
Davis, Dorothea.....	Los Angeles
Dill, David Bruce.....	Hemet
Freeman, Stella.....	South Pasadena
Gaskell, Christopher Harold.....	San Diego
Gillies, Araminta Mary.....	South Pasadena
Gordy, Mabel Catherine.....	Pasadena
Key, Sarah Elizabeth.....	Fullerton
Lewis, Charles Henry.....	Los Angeles
McCoy, Horace Hoagland.....	Beaumont
McDuff, Esther.....	Long Beach
McKelvey, Elizabeth Hamilton.....	Los Angeles
Nelson, Nora Allen.....	Los Angeles
Percival, Willian Bush, Jr.....	Los Angeles
Seay, Wellford.....	South Pasadena
Stevens, John Egbert.....	Modesto
Thacker, Emma Beryl.....	Los Angeles
Thorndike, William Sharp	Hillard, Wash.
Tidball, Edith Lucile.....	Santa Ana
Wendling, Lillie Ethel	South Pasadena
Wieman, Drury Park.....	Los Angeles
Wieman, Lois Hazel.....	Los Angeles
Yakeley, Leon.....	Los Angeles

JUNIORS

Abbott, Nellie.....	Pasadena
Aiken, Mildred.....	Newport
Akimoto, Katsuyi.....	Los Angeles
Baer, Francis Shaw.....	Pasadena
Beede, Benjamin Willis.....	Whittier
Bickford, John Thomas.....	Los Angeles
Boal, Louise Baxter.....	Los Angeles
Brier, William Wallace.....	Los Angeles
Brown, Frederick Walton.....	Pasadena
Bryan, Edith Sibyl.....	Pasadena
Clark, Stephen Cutter, Jr.....	Pasadena
Cohn, Esther.....	El Rio
Daniell, Margaret Lantz.....	Los Angeles
Ehrenfeld, Day.....	Pasadena
Eldred, Fred H.....	Los Angeles
Guy, Gratia.....	Los Angeles
Hannaford, William Fiske.....	Sierra Madre
Hazlett, Edith May.....	Los Angeles
Henderson, John Alexander.....	Santa Ana
Heninger, Walter.....	Los Angeles
Henry, William Melors.....	Los Angeles
Hunt, Hazel Chatfield.....	Los Angeles
Jones, Thaddeus Crane, Jr.....	Pasadena
Keith, Mildred Marie.....	South Pasadena
Kincaid, Grace Dorothea.....	Los Angeles
Kirkpatrick, Harry Allister.....	Los Angeles
Lawyer, Edwin Briggs.....	South Pasadena
McClung, Katherine Wilma.....	Los Angeles
McConnell, William Orr....	Colorado Springs, Colo.
McDonald, Bruce Harold.....	Los Angeles
McNary, Hugh Alin.....	Los Angeles
Moore, Harriet Edith.....	Los Angeles

Pettit, Anna Almeda.....	Parlier, Fresno. Co.
Rogers, Rowena Jean.....	Los Angeles
Smith, Louise.....	Los Angeles
Tamura, Paul Kiyoshi.....	Los Angeles
Wallace, Grace Ann.....	Alhambra
Watts, Arthur Pryor.....	Los Angeles
Young, Paul Thomas.....	Los Angeles

SOPHOMORES

Acosta, Faith Ramona.....	Pasadena
Adams, Pearl Margaret.....	Los Angeles
Allen, William Wadley.....	Alhambra
Beede, Lillian Elizabeth.....	Whittier
Boice, Frank Seymour.....	South Pasadena
Bollinger, Glen Harold.....	Hollywood
Bouick, Frank Jackson.....	San Anselmo
Boyd, Gladys Irene.....	Los Angeles
Byram, Roy Mack.....	Santa Ana
Chapman, Leland Stanford.....	Los Angeles
Crawford, Edwin Dickey.....	Fresno
Doig, Leroy Lowry.....	Santa Ana
Flippen, Florence Danner.....	Orange
Gall, Erskine Meade.....	Santa Ana
Gilchrist, George R. M.....	Los Angeles
Goff, George Almon.....	San Anselmo
Graham, Winnifred.....	Long Beach
Hall, Edwin Carl.....	Monrovia
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Lord, Margaret Wallace.....	Alhambra
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McDermont, Earl Alexander.....	Long Beach
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Sharpe, Clara.....	Alhambra
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Stearns, Theodore Le Grand.....	Los Angeles
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Sumnes, Charlotte Louise.....	Alhambra

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Thorne, George Webber.....	Pacific Grove
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Truesdell, Fanny.....	Redlands
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Annin, William Clement.....	Los Angeles
Baird, Martha.....	Clarksburg, W. Va.
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Barnhill, Jessie.....	Long Beach
Bigelow, Curtis Rorebeck.....	Flandreau, So. Dak.
Boice, Henry Gudgell.....	South Pasadena
Boring, Nellie Elizabeth.....	Los Angeles
Buell, Lester Hervey.....	Montecito
Burton, Lois R.....	Los Angeles
Clark, Clara Lynn.....	Burbank
Converse, Harold Dudley.....	Corning
Cook, John Wesley.....	Los Angeles
Cook, Mable Elizabeth.....	Los Angeles
Creighton, Allen Miller.....	Phoenix, Ariz.
Creighton, John Hayes.....	Phoenix, Ariz.
Creighton, Ruth.....	Phoenix, Ariz.

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Knudson, Mabel Lillian.....	Los Angeles
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Potter, Ralph Benajah.....	Hollywood
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Shepard, Robert Edwin.....	San Diego
Shinn, Albert Robin.....	Los Angeles
Smart, Morris Carson.....	Santa Ana
Smith, Hallie Jean.....	Santa Barbara
Smith, Ruth.....	Los Angeles
Squire, Loyd Parker.....	Downey
Stehman, Henry M.....	Pasadena
Steintorf, Paul Bower.....	Calexico, Cal.
Sudden, Anita Elenora.....	Ventura
Tidball, Charles Taylor.....	Santa Ana
Trout, Elsie Lovica.....	Burbank

Walk, Walter Albert.....	Downey
Warren, Leroy Alexander.....	Santa Ana
West, Margaret Donaldson.....	South Pasadena
Wilbur, De Los Dickson.....	Burbank
Wilsie, Ross M.....	El Centro
Wilson, Harold Edson.....	Long Beach
Work, Florence Esther.....	Venice

SPECIALS

Houghton, Ella.....	Rivera
Houghton, Stella.....	Rivera
Lacy, James Samuel.....	Los Angeles
Logan, Arthur Evan.....	Escondido
McAllister, Wallace D. B.....	Springfield, Mo.
Phillips, Chloe Alberta.....	Los Angeles
Sanborn, Fern Edna.....	Sacramento
Smith, Bernice Belinda.....	Elie, Manitoba
Smith, Theodore Parker.....	Los Angeles
Vermilion, David Sinton.....	Los Angeles

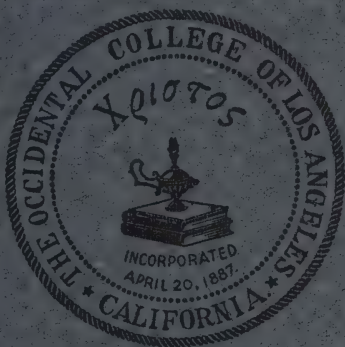
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CATALOGUE
of
OCCIDENTAL
COLLEGE

1913-1914

ANNOUNCEMENTS
FOR 1914-1915

LOS ANGELES
CALIFORNIA

Y. 2. 3. 4.

CALENDAR FOR 1914.

1914	S	M	T	W	T	F	S	1914	S	M	T	W	T	F	S		
Jan.	..	..	..	..	..	1	2	3	July	..	..	..	1	2	3	4	
	4	5	6	7	8	9	10			5	6	7	8	9	10	11	
	11	12	13	14	15	16	17			12	13	14	15	16	17	18	
	18	19	20	21	22	23	24			19	20	21	22	23	24	25	
	25	26	27	28	29	30	31			26	27	28	29	30	31	..	
	..	..	..	..	..	..	..			Aug.	..	..	..	..	..	1	
Feb.	1	2	3	4	5	6	7				2	3	4	5	6	7	8
	8	9	10	11	12	13	14				9	10	11	12	13	14	15
	15	16	17	18	19	20	21				16	17	18	19	20	21	22
	22	23	24	25	26	27	28				23	24	25	26	27	28	29
	..	..	..	..	..	..	..				30	31	..	..	..	..	..
Mar.	1	2	3	4	5	6	7		Sept.	..	..	1	2	3	4	5	
	8	9	10	11	12	13	14				6	7	8	9	10	11	12
	15	16	17	18	19	20	21				13	14	15	16	17	18	19
	22	23	24	25	26	27	28				20	21	22	23	24	25	26
	29	30	31	..	..	..	..				27	28	29	30	..	..	..
Apr.	..	..	..	1	2	3	4		Oct.	..	..	..	..	1	2	3	
	5	6	7	8	9	10	11				4	5	6	7	8	9	10
	12	13	14	15	16	17	18				11	12	13	14	15	16	17
	19	20	21	22	23	24	25				18	19	20	21	22	23	24
	26	27	28	29	30	..	..				25	26	27	28	29	30	31
May	..	..	..	..	..	1	2		Nov.	1	2	3	4	5	6	7	
	3	4	5	6	7	8	9			8	9	10	11	12	13	14	
	10	11	12	13	14	15	16			15	16	17	18	19	20	21	
	17	18	19	20	21	22	23			22	23	24	25	26	27	28	
	24	25	26	27	28	29	30			29	30	..	..	..	..	..	
	31	..	..	..	..	..	..			29	30	..	..	..	..	..	
June	..	1	2	3	4	5	6		Dec.	..	..	1	2	3	4	5	
	7	8	9	10	11	12	13				6	7	8	9	10	11	12
	14	15	16	17	18	19	20				13	14	15	16	17	18	19
	21	22	23	24	25	26	27				20	21	22	23	24	25	26
	28	29	30	..	..	..	..				27	28	29	30	31	..	..

CALENDAR FOR 1915.

1915	S	M	T	W	T	F	S	1915	S	M	T	W	T	F	S
Jan.	...	...	...	...	...	1	2	July	...	...	...	...	1	2	3
	3	4	5	6	7	8	9		4	5	6	7	8	9	10
	10	11	12	13	14	15	16		11	12	13	14	15	16	17
	17	18	19	20	21	22	23		18	19	20	21	22	23	24
	24	25	26	27	28	29	30		25	26	27	28	29	30	31
	31	...	...	...	...	...	...		...	...	...	...	...	...	...
Feb.	...	1	2	3	4	5	6	Aug.	...	...	...	...	...	...	...
	7	8	9	10	11	12	13		1	2	3	4	5	6	7
	14	15	16	17	18	19	20		8	9	10	11	12	13	14
	21	22	23	24	25	26	27		15	16	17	18	19	20	21
	28	...	...	...	...	...	...		22	23	24	25	26	27	28
	29	30	31	...	...	...	...		29	30	31	...	...	...	...
Mar.	...	1	2	3	4	5	6	Sept.	...	...	...	1	2	3	4
	7	8	9	10	11	12	13		...	...	...	5	6	7	8
	14	15	16	17	18	19	20		12	13	14	15	16	17	18
	21	22	23	24	25	26	27		19	20	21	22	23	24	25
	28	29	30	31	...	...	...		26	27	28	29	30	...	...
Apr.	...	...	...	...	1	2	3	Oct.	...	...	...	...	...	1	2
	4	5	6	7	8	9	10		3	4	5	6	7	8	9
	11	12	13	14	15	16	17		10	11	12	13	14	15	16
	18	19	20	21	22	23	24		17	18	19	20	21	22	23
	25	26	27	28	29	30	...		24	25	26	27	28	29	30
	31	...	...	...	...	...	...		31	...	...	...	...	...	...
May	...	...	...	...	...	1	2	Nov.	...	1	2	3	4	5	6
	3	4	5	6	7	8	9		7	8	9	10	11	12	13
	10	11	12	13	14	15	16		14	15	16	17	18	19	20
	16	17	18	19	20	21	22		21	22	23	24	25	26	27
	23	24	25	26	27	28	29		28	29	30	...	...	...	...
	30	31	...	...	...	...	...		...	...	...	...	...	...	...
June	...	1	2	3	4	5	6	Dec.	...	...	...	1	2	3	4
	7	8	9	10	11	12	13		5	6	7	8	9	10	11
	13	14	15	16	17	18	19		12	13	14	15	16	17	18
	20	21	22	23	24	25	26		19	20	21	22	23	24	25
	27	28	29	30	...	...	...		26	27	28	29	30	31	...

CALENDAR

1914

Sept. 21-22, Monday-Tuesday

Examinations for Admission and for Removal of
Conditions.

Registration of Students.

Sept. 23, Wednesday, 11 a. m.

First Semester Begins.

Nov. 26-27, Thursday-Friday

Thanksgiving Recess.

Dec. 18, Friday, 4 p. m.

Christmas Vacation Begins.

1915

Jan. 5, Tuesday, 8:30 a. m.

Christmas Vacation Ends.

Feb. 1-5, Monday-Friday

Mid-Year Examinations.

Feb. 5, Friday, 4 p. m.

First Semester Ends.

Feb. 8, Monday

Registration of New Students.

Feb. 8, Monday, 11 a. m.

Second Semester Begins.

Mar. 26, Friday, 4 p. m.

Spring Vacation Begins.

April 6, Tuesday, 8:30 a. m.

Spring Vacation Ends.

June 6, Sunday, 4 p. m.

Vesper Service of the College Christian Associations.

June 7-11, Monday-Friday

Final Examinations.

June 13, Sunday, 4 p. m.

Baccalaureate Sermon.

June 15, Tuesday

Senior Class Day.

June 16, Wednesday, 10:30 a. m.

Twenty-third Annual Commencement.

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E. P. Clapp, M.D.,
Rev. Hugh K. Walker, D.D., LL.D.

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Rev. Robert Freeman, D.D.,
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1914-1915

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Dean of the Faculty: Professor of Philosophy.

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Instructor in Mechanical Drawing.

JOHN PRICE ODELL, M.A.,
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†On leave of absence for the year 1914-1915.

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JOSEPH A. PIPAL,
Physical Director.

ROBERT GLASS CLELAND, Ph.D.,
Professor of History.

MRS. JOSEPH A. PIPAL,
Physical Director for Women.

CLYDE L. E. WOLFE, M.A.,
Acting Professor of Physics.

JULIUS W. EGGLESTON, M.A.,
Professor of Geology and Botany.

CARY T. WRIGHT, M.S.,
Professor of Economics.

O. THEODORE JOHNSTON, C.P.A.,
Instructor in Accounting.

HUBERT GIBSON SHEARIN, Ph.D.,
Professor of English.

WILLIAM ORR McCONNELL, A.B.,
Instructor in Spanish.

WILLIAM A. SHARP,
Instructor in Freehand Drawing.

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President.

THOMAS G. BURT, Ph.D.,
Dean of the Faculty.

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Registrar.

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Field Secretary.

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JENNE GREGG GAILEY,
Assistant to the Librarian.

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Athletics—Professor Esterly, Professor Chandler, Professor Bell, Director Pipal, Professor Eggleston.

Catalogue and Curriculum—Professor Ward, Professor Allen, Professor Esterly, Professor Bell, Dean Burt.

Christian Work—Professor Kellogg, Professor Cunningham, Professor Cleland, Mr. Westcott.

Grounds and Buildings—Professor Bell, Professor Odell, Professor Moll.

Laboratories—Professor Chandler, Professor Esterly, Professor Wolfe.

Library—Professor Cook, Dean Burt, Professor Kellogg, Professor Esterly, Professor Cunningham, Professor Wright.

Rules and Discipline—Dean Burt, Professor Cleland, Professor Cook, Professor Ward, Professor Cunningham, Professor Paul.

Social Life—Professor Cunningham, Dean Burt, Mrs. Pipal.

EVENTS OF THE YEAR

1913

- Sept. 24** Opening of the College Year. Addresses: Ex-Senator Frank P. Flint, Los Angeles, "Unread Volumes"; Rev. John Balcom Shaw, D.D., LL.D., Los Angeles, "Loyalty at Any Cost."
- Sept. 26** Lecture, Rev. William Horace Day, D.D., Los Angeles, "The New Humanity."
- Oct. 6** Address, Miss Margaret Matthew, Secretary Y. W. C. A., Tokio, Japan, "Educational Problems in Japan."
- Oct. 9** Address, Rev. Clarence A. Spaulding, Pasadena, "The Ideals of Cecil Rhodes."
- Oct. 10** Lecture, Rev. Sydney L. Gulick, D.D., Lecturer Imperial University, Kyoto, Japan, "The New Japan and California."
Address, Rev. L. A. Gould, Los Angeles, "A Great Day for China."
- Oct. 14-15** Rhodes Scholarship Examinations for Southern California, held at Occidental.
- Oct. 17** Lecture, Prof. W. S. Stevenson, LL.D., Occidental College, "Mollycoddles."
- Oct. 20** Address, Rev. Chas. S. McFarland, D.D., Secretary Federal Council of Churches of Christ in America, "A Common Industrial Creed."
- Oct. 27** Address, Rev. J. A. Stevenson, D.D., Santa Ana, "Life."
- Oct. 30** Address, Rev. Edwin F. Hallenbeck, D.D., San Diego, "Following the Vision."
- Nov. 7** Address, C. E. Sebastian, Chief of Police, Los Angeles, "Methods of Handling Criminals."
- Nov. 21** Address, Seward Simon, President A. A. U. of Southern California, "Our Physical Possession."
- Dec. 5** Address, Rev. C. Tilford Erickson, Special Representative of Albania to the United States, "Albania the Danger Zone of the Balkans."
- Dec. 9** Occidental-Redlands Debate, at Redlands University.
- Dec. 12** Lecture, Prof. R. G. Cleland, Ph.D., Occidental College, "The Relation of Slavery to the Acquisition of California."

- Dec. 12** Home Concert of the Occidental College Glee Club.
- Dec. 17** Address, Rev. William H. Foulkes, D.D., Secretary Presbyterian Board of Ministerial Relief, New York, "Home Claims on the College Student."
- Dec. 18** "Twelfth Night". Presented by the Arden Club.

1914

- Jan. 16** Address, Mrs. Catherine Booth-Clibborne, former Commander of the Salvation Army in France, "Sin and Its Doctor."
- Jan. 19** Address before the Students' Prohibition League, Hon. S. W. Odell, Pasadena, President California Dry Federation, "Prohibition from a Legal Standpoint."
- Jan. 23** Lecture, Rev. J. W. Johnson, D.D., Philadelphia, "Abraham Lincoln, Christian."
- Jan. 30** Address, Prof. W. Earl Flynn, Health Specialist, "Nature's Road to Health."
- Feb. 12** Address, Dean Chung, Canton Christian College, China, "Problems in the Orient."
- Feb. 13** Reading, Mr. James W. Foley, Original Poems.
- Feb. 18-19** Addresses, Rev. John Balcom Shaw, D.D., LL.D., Los Angeles, Special Religious Topics.
- Feb. 28** Triangle Debate between Occidental, Pomona and U. S. C.
- Mar. 2** Address, Rev. A. A. Fulton, D.D., Canton, China, "Generalship on the Mission Field."
- Mar. 6** Address, Dean Geo. A. Damon, B.S., Throop Polytechnic Institute, Pasadena, "Public Utilities."
- Mar. 9** Third Annual Complimentary Entertainment provided by Occidental College in honor of the High Schools of Southern California. Lecture, Principal Booker T. Washington, LL.D., Tuskegee Institute, Tuskegee, Alabama.
- Mar. 13** Address, Principal Booker T. Washington, LL.D., Tuskegee Institute, Alabama, "Progress of the Black Race in the South."
- Mar. 13** "A Night Off," Presented by the Junior Class.

- Mar. 17 Address, Geo. Sherwood Eddy, Y. M. C. A. Secretary for Asia, "A Man's Job."
- Mar. 20 Lecture, Prof. Robert D. Williams, Ph.D., Pomona College, "The Mediumistic Art."
- Mar. 26 Intercollegiate Oratorical Contest, held at Pomona College.
- Mar. 26 Quarter Centennial Celebration of Founding of Occidental College. Historical Statement, Rev. W. S. Young, D.D., Secretary of the Board of Trustees. Greetings: From the Alumni, Prof. R. G. Cleland, Ph.D., President Alumni Association; From the Faculty, Prof. W. S. Stevenson, LL.D.; From the Trustees, Hon. Frank P. Flint, President of the Board; From the College Board of the Presbyterian Church, President J. H. MacCracken, Ph.D.; From Former Leaders of Occidental College, Rev. Guy W. Wadsworth, D.D., President of Occidental 1897-1905.
- Mar. 26 Congratulatory Banquet. Addresses: William Shaw, LL.D., General Secretary United Society of Christian Endeavor; Syndie J. H. MacCracken, Ph.D., President the College Board of the Presbyterian Church; John Willis Baer, LL.D., President of Occidental College; Rev. J. T. Stone, D.D., LL.D., Moderator of the General Assembly of the Presbyterian Church.
- Mar. 27 Dedication of Johnson Hall of Letters, Fowler Hall of Science, James Swan Hall. Dedicatory Addresses: Johnson Hall of Letters, Rev. John Balcom Shaw, D.D., LL.D., Los Angeles; Fowler Hall of Science, Rev. Robert Freeman, D.D., Pasadena; James Swan Hall, Rev. J. T. Stone, D.D., LL.D., Chicago. Congratulatory Addresses: President James A. Blaisdell, D.D., Pomona College; President Benjamin Ide Wheeler, Ph.D., LL.D., University of California; Syndie J. H. MacCracken, Ph.D., New York University; Hon. Chas. W. Fairbanks, LL.D., Indianapolis; Hon. Frank B. Kellogg, LL.D., St. Paul; General Secretary William Shaw, LL.D., United Society of Christian Endeavor, Boston. Greetings, His Excellency, Woodrow Wilson, Ph.D., LL.D., President of the United States.

- Apr. 8** Address, Dan Crawford, Africa, "Education in Middle Africa."
- Apr. 15-May 13** Six Illustrated Lectures, William E. Ritter, Ph.D., Professor of Zoology, University of California, Director of Scripps Institution for Biological Research. "The Sea and Its Inhabitants."
- Apr. 17** Address, Rev. Arthur S. Phelps, D.D., Los Angeles, "Who Was Your Grandfather?"
- May 1** Address, Ford A. Carpenter, LL.D., U. S. Weather Forecaster for Southern California, "How the Weather Is Made."
- May 8** Lecture, Prof. F. P. Brackett, M. A., Pomona College, "Astronomy and Meteorology."
- May 8** Home Concert, Women's Glee Club of Occidental College.
- May 9** Intercollegiate Prohibition Oratorical Contest, held in Pasadena.
- May 15** Intercollegiate Peace Oratorical Contest, held at Whittier College.
- May 20** Address, Edwin Berwick, International Peace Advocate, Pacific Grove, "The Treaty of Ghent."
- May 21** Address, Rev. Wm. H. P. Crothers, Philadelphia, "Power."
- May 22** Willis H. Booth, Vice-President Security Trust and Savings Bank, Los Angeles, "A Tourist's Impressions of South America."
- May 29** Rev. Geo. L. Spinning, D.D., Pasadena, "The Reunion at Gettysburg."
- June 14** Baccalaureate Sermon, Rev. Hugh K. Walker, D.D., LL.D., Long Beach.
- June 15** Senior Play.
- June 16** Senior Class Day.
- June 16** President's Reception to the Seniors.
- June 17** Twenty-second Annual Commencement.
- June 17** Alumni Banquet.

OCcidental COLLEGE

Occidental is a Christian college of the liberal arts and natural sciences, with certain very definite aims. One of these is to provide the best possible training preliminary to the study of the learned professions. Those planning the practice of Law, for example, are offered a wide range of subjects fundamental to their calling, such as History, Economics, Sociology and English. Candidates for Medicine are supplied with an admirable program in Chemistry and Biology. Candidates for the ministry find their needs anticipated in the departments of Biblical Literature, Philosophy, History and the Classics. The prospective teacher, aspiring first of all to know his subject, cannot but appreciate the variety of options set before him for specialization in his undergraduate course. The preparation afforded for post-graduate study is both ample and thorough. This is shown in the high rank taken by Occidental alumni in the graduate departments of the best known American universities, east and west.

In most departments of Engineering, the first two years may be taken at Occidental without loss of time or thoroughness. Numerous instances are on record where the plan has proved decidedly advantageous.

The man facing a business career, as well as the man seeking a profession, will find at Occidental courses that harmonize with his particular purpose. Such courses as those in Modern Industrialism, Accounting, Public and Corporation Finance, not to mention the more theoretical branches of Economics,

are of a nature to bear directly on his life work. And it is planned that they should. The day has passed when one can afford to spend four years in college merely for the mental discipline, and with no reference to his peculiar aptitudes or the calling he is to pursue. This fact, long recognized with relation to Law and Medicine, is coming to be recognized with relation to business. Here, as elsewhere, general and special training may go hand in hand without detriment to either. Theory can and must lead in the direction of the practical.

One purpose of the college, however, which can never be subordinated to another, is to fit men and women for life in its broadest sense. In whatever rank or station, the value of the mental discipline, the wide outlook and the high ideals here acquired is beyond calculation. The brand of culture which goes with an Occidental diploma means for the bearer reduced risk of failure, increased capacity for enjoyment, largely multiplied usefulness to society.

Though bound by no peculiar creed, Occidental stands firmly on the great truths of evangelical Christianity. Forever barring sectarianism, the word of God is held to be the one book of divine authority. Through faith in its teachings the founders of the college sought to mould young men and young women to lives of the highest usefulness, and in that faith their successors remain.

Location and Grounds

Boarding an Eagle Rock City car on Spring Street, or a York Boulevard car on Main, the stranger soon

finds himself in a picturesque valley with every suggestion of the city left behind. Here, just outside the northern limits of Los Angeles, is the college campus, extending over ninety acres and affording a landscape of rare beauty. In shape it resembles a roughly drawn semicircle, a low range of foothills marking the diameter, while the curved portion takes in a considerable section of the valley. Above the hills appear the Sierra Madre Mountains, including Mount Lowe and Mount Wilson with its world-famous solar observatory. In two other directions the sky line is broken by the Verdugo and Santa Monica ranges. A lower area toward the southwest gives the sea breeze direct access, thus purifying and tempering the atmosphere to a degree not often enjoyed away from the beaches.

The most conspicuous charm of the campus is its diversity. Its highest point forms a lookout from which may be obtained a wide view of the surrounding region, with now and then a glimpse of the sea. One corner is adorned with a grove of wide-spreading live oaks, a suitable addition in view of the probable location here of a young women's dormitory. Through an opening in the hills back of this point, a peculiarly attractive vista stretches across vale and woodland up to the summit of Mount Lowe. On a convenient slope, where it is hoped such a structure may presently be erected, appears the general contour of an open-air theater, hollowed out with striking precision by the hand of nature.

Art, as well as environment, has had a share in rendering the location ideal. Aside from excavating

for buildings, more than \$20,000 was expended in grading. Trees have been planted along all the drives and elsewhere as required for shade or ornamentation. A few years' growth, under the favoring influence of California's climate, will add whatever touch may be needed to complete nature's handsome design.

The athletic field, not yet completed, is to be a close copy of the famous Franklin Field, on the grounds of the University of Pennsylvania. The east side is bounded by a natural embankment, of suitable pitch for extensive bleachers. The two-twenty straight-away, paralleling the front of this slope, is a new feature among California colleges. Other features, shortly to be added, will be unique and admirable. Life in the open is nowhere more alluring, and nowhere less subject to interruption at all seasons of the year than in this corner of the southland. These climatic advantages the trustees have sought to match in the place provided for outdoor sports. The result will be an athletic field equal to any in the west.

Buildings

Close against the hills which form the eastern boundary of the campus stand two buildings, facing west, companions in appearance and outward design, one known as the Johnson Hall of Letters and the other as the Fowler Hall of Science. The former is the gift of Mr. and Mrs. O. T. Johnson of Los Angeles, credited with generous gifts to the college on various other occasions. The latter is a memorial to Mr. Eldridge M. Fowler of Pasadena, erected by his

daughter and granddaughter. Each of these buildings contains three stories, or four at the back, with ground dimensions 155 by 80 feet. The exterior, generally speaking, is after the style of the Italian Renaissance. The structural frame is of reinforced concrete, the outside walls being in white stucco with stone trimmings. The divisional walls are of hollow tile and may be removed when necessary, allowing a complete change of the interior arrangement at any time. Both structures are strictly fireproof. The space of 100 feet which separates them is occupied by an ornamental terrace, known as the Upper Quadrangle. The approach to this is by broad flights of concrete steps, while, from the Quadrangle itself, similar steps lead to the second floor of either Building. Back of the Quadrangle, on the most commanding site of all, it is planned that an administration building shall some day stand, worthy in every way to be the head of the group.

On the first floor of Johnson Hall are found the offices of President, Dean, Registrar and Business Manager, besides the college postoffice, the students' book store and the office of *The Occidental*. The Y. W. C. A. Hall and the study and rest rooms of the young women are on the same floor.

An Old English chapel, rich but chaste in all its furnishings, is located in the south end of this building. Its main entrance is from the Quadrangle, with side entrances from the corridor on the second floor.

The remainder of the building is devoted to class rooms and offices for various departments of instruction, excepting two large halls on the fourth floor,

which are occupied by the men's literary societies. Heat, light and ventilation, with all accessories belonging to an up-to-date institution, are everywhere well supplied.

Fowler Hall provides a home for the departments of natural science, at once handsome and commodious. Every facility demanded by modern methods of instruction is incorporated. The equipment for lecture room and laboratory alike is the best in use. Among single structures devoted to pure science no better model will be found on the Pacific Slope.

For the present, a students' cafe is located on the first floor, occupying the three rooms nearest the Quadrangle. Part of the remaining space is taken up with Y. M. C. A. quarters, and with study and locker rooms for the young men. At the south end a room 75 feet long and of convenient width serves as a temporary home for the library. Pending the erection of a separate building, the space here provided has been equipped with stacks and other fixtures of a modern library so arranged as to render it more than comfortable and not seriously crowded.

The second floor is devoted to Physics and Biology. The Physics lecture room, on the east side of the corridor, has seats for 75, rising in concentric rows from front to back. South of this is a large make-up and store room, and next to this a dark room and an office. After an intervening stairway comes the Optical laboratory, with black walls. The laboratories for Electricity and General Physics cover a broad section at the south end, extending the full width of the building. The space west of the corridor

is assigned wholly to Biology. Lecture rooms for Zoology and Botany are included, with laboratories of ample dimensions for Botany and for General and Advanced Zoology. The location of these rooms insures abundant light, a matter of no small importance in connection with fine microscopic work. Storage rooms are located as needed.

On the third floor are two rooms assigned to Mathematics and another to Education. With this exception, the entire floor is given over to Chemistry. The principal lecture room is on the east side, light and airy—the ceiling being two stories in height—with seats for 75. These are in concentric order, rising from front to rear. Back of the instructor's desk opens a capacious make-up and store room, with office and dark room adjoining. A stairway is next, and then a room specially fitted up for work in Assaying and Combustion Analysis. Stretching across the south end of the building from front to rear is the General Chemistry laboratory, with four hoods and accommodations for 120 students. In the same room work in Qualitative Analysis and Organic Chemistry is also carried on. Next to this, with the Balance room intervening, is the laboratory for Quantitative Analysis, on the west side of the building, accommodating 24 at a time or 48 when necessary.

The fourth floor is assigned to Geology, and contains a lecture room, laboratory, office, dark rooms and museum.

James Swan Hall is a dormitory for men, erected by Mrs. Frances B. Swan of Pasadena as a tribute to her husband, Mr. James Swan. Strictly fireproof,

and constructed on the most modern lines, it provides a comfortable home for 54 students. The rooms are arranged singly, in pairs and in suites of three, each suite of three rooms to be occupied by two young men. Lovers of outdoor life will be especially attracted by the sleeping balconies on the top floor, containing beds for eighteen. On the ground floor is a large room for lounging and social recreation, with open fireplace, pictures, settees and other appointments equally homelike. The plumbing in the bathrooms includes the latest improvements. Among other features worthy of mention are the six shower baths, distributed in different parts of the building. The rooms are completely furnished throughout, the only exception being towels, which the student is expected to bring. Closets, trunkrooms, electric lights, steam heat and every modern convenience are provided. For details regarding rates, choice of rooms, etc., see under General Information.

Steam heat for all buildings is supplied from a central heating plant. While complete for its purpose, its walls are to form part of the foundations for a College Commons, soon to be erected. A feature so essential to the college community, as this will be, must not prove inadequate when finished. As planned, therefore, the Commons will be on a scale equal to that of James Swan Hall, and similar in general appearance.

The buildings already erected are part of a larger plan, prepared by Myron T. Hunt, the outlines of which are to be followed in all future construction. The type of architecture so admired in the present

group will be consistently carried out, its educational value increasing with every new structure that rises. A Library, a Gymnasium and a Women's Dormitory are among the first additions to be made to the present group. Plans for two of these have already been accepted.

Library

The Library contains more than eight thousand volumes, including many valuable reference works. With funds in hand, \$500 of which is a recent donation from the Alumni, a serviceable collection of new works will be purchased. Several of the department libraries are especially creditable, being well stocked with the latest and best literature in their particular lines.

Laboratories and Apparatus

The Biological Laboratories are well equipped. The student in the beginning courses is provided with a compound microscope suitable for all ordinary work; in the higher courses where a microscope is required, each student has an instrument that is completely equipped with condenser, oil-immersion objective and camera. The departments have a very full equipment of stains, reagents and microscopical accessories, such as microtomes, paraffine baths and the like.

The zoological collections are adequate for present needs, containing representative types of the animal kingdom and some special preparations of both vertebrates and invertebrates. There is a working collection of bird skins. There are also a number of good

models for embryology and a complete dissectable model of man. The fine collection of moths and butterflies belonging to the late Mr. Eugene C. Frank of Glendale is now the property of the department.

The Botanical equipment is fully sufficient for the needs of the courses offered. Included in the collection is a catalogued herbarium of about 1000 sheets.

The department of Geology possesses the following collections, all properly classified and labeled: The George H. Parker Gold Medal Collection; the Gail Borden Collection of Minerals and Ores; the H. B. Gage Collection of Southern California Minerals; the Foote Collection—a physical series; the Ward Genetic Rock Collection; the J. C. Fales Paleozoic Fossil Collection; a Miscellaneous Collection of Minerals, Rocks and Ores, gathered in the field by the various classes since 1907 and containing a great amount of valuable material for class use. In addition to those above named, the W. A. Fiske Collection of Lantern Slides possesses a rare value as illustrative of almost every phase of geological study. These collections accompanied by maps, models, charts and other illustrative material, greatly assist in acquiring a proper conception of the laws of dynamical and historical geology.

The Chemical laboratories are completely stocked with supplies and apparatus of the most approved type. Additions are made from time to time as the needs of the courses demand.

The department of Physics is equipped with a large supply of modern apparatus for demonstration from the best foreign makers, and with individual

laboratory apparatus for two years of college work as well as for the elementary course. A valuable addition to the department's resources is a workshop supplied with a two-horsepower motor, a screw-cutting engine lathe, a wood lathe, a saw table, an emery grinder and a one-kilowatt direct-current generator.

The department of Mathematics is equipped with a reference library of 200 volumes, by the best authors, and covering every branch of mathematics. The department also has two sextants, transit, Y level, leveling rod, polar planimeter, slide rule, Thatcher's calculating machine, Crelle's calculating tables, a high-grade protractor, parallel rulers, celestial globe, planetarium and a number of less important instruments.

REQUIREMENTS FOR ADMISSION

Admission to the Freshman Class

An **Entrance Unit** represents a subject pursued through one school year in high school or academy, with not less than one hundred and sixty recitations of forty-five minutes each, two periods in the laboratory counting as one recitation.

Freshman standing without further tests is granted to graduates of approved preparatory schools presenting fifteen entrance units, all of which are recommended; provided, however, that two out of the fifteen are in English and not more than three are in the vocational subjects numbered 18-21. A subject personally recommended by the Principal will be counted as of recommending grade. Recommendation in less than the fifteen entrance units required may be supplemented by passing satisfactory examinations at the College or under one of the recognized examination boards. In general, candidates should not seek to be admitted until they have completed the requirements in full.

Provisional standing may be granted to graduates of approved preparatory schools presenting fifteen entrance units of **high average** grade, not all of which are recommended, each case to be decided on its merits by the Committee on Admission and Classification. One thus admitted will not be finally enrolled until the second semester, and then only provided his scholarship record for the first semester has been altogether satisfactory.

In lieu of the above requirements, any candidate may qualify for Freshman standing by passing satisfactory examinations in all the subjects necessary for entrance, either at the College or under one of the recognized entrance examination boards.

Applications for admission on less than fifteen units will not be considered.

A statement that the candidate is morally and intellectually fit to be admitted into the College must accompany each application, with the signature of some responsible person attached. For graduates of high schools and academies this statement is included in the application blank furnished by the College, which must first be filled out with the candidate's record and other desired information, and then be signed by the Principal.

Advanced Standing

Students from other institutions of recognized collegiate rank will be admitted to such standing as seems just and equitable.

Graduates of the State normal schools who are also graduates of accredited high schools and who are especially recommended by the normal school faculties, may enter Occidental with a credit of thirty-two units, and thus be enabled to complete their college course in three years. Those who have graduated in the Academic Professional Course of the State normal schools will be allowed forty-eight units when they can in one semester's work qualify for admission to the Junior year.

Special Students

Those whose preparation does not admit them to the status of Freshmen are sometimes admitted as special students, but only in case of age and maturity. Special students are subject to the same regulations as the others. They may become candidates for a degree at any time by meeting the usual entrance requirements. On withdrawing from the institution they will be granted certificates showing the work completed.

Admission Subjects

In subjects offered for college entrance, the University of California sets the standard to which all accredited high schools of this state must conform. For this reason, and because the state's requirements are familiar to every one in California concerned with secondary education, Occidental makes use of the University's list. Detailed descriptions are omitted, as they are in the hands of all the principals. Outside of California, the accrediting lists of the different state universities will be consulted, both as to subjects and schools, and applications for admission should, if possible, be made on university blanks.

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|-----|--------------------------|--------------|
| *1. | Elementary English | 2 units |
| | Required for entrance. | |
| 2. | Plane Geometry | 1 unit |
| 3. | Elementary Algebra | 1 unit |
| 4a. | Algebraic Theory | 1½ or 1 unit |

*Although applicants are admitted to Freshman English who are recommended by accredited schools in a minimum of two years of English, it is strongly advised that the subject be pursued for three years, or preferably four. Students whose work after admission proves notably defective in spelling, punctuation, idiom, or paragraphing will be required to remove the defect under conditions named elsewhere.

4b.	Solid Geometry	$\frac{1}{2}$ unit
5.	History and Government of the U. S..	1 unit
6a.	Elementary Latin; Caesar, Nepos...	1 unit
6b.	Latin Composition, Elementary.....	1 unit
6ab ¹ .	Elementary Latin	1 unit
	One year in subjects 6a and 6b.	
7a.	Advanced Latin; Cicero, Sallust.....	$\frac{2}{3}$ unit
7b.	Advanced Latin; Vergil, Ovid.....	$\frac{2}{3}$ unit
7c ¹ .	Latin Composition, Advanced.....	$\frac{1}{3}$ unit
	Accompanying subject 7a.	
7c ² .	Latin Composition, Advanced.....	$\frac{1}{3}$ unit
	Accompanying subject 7b.	
8a.	Elementary Greek	1 unit
8b.	Anabasis I-IV, or equivalent	1 unit
9a.	Attic Prose, Advanced	$\frac{1}{2}$ unit
9b.	Homer's Iliad I-III	$\frac{1}{2}$ unit
10.	Ancient History and Geography.....	1 unit
11.	Physics	1 unit
12a ¹ .	Synthetic Projective Geometry.....	$\frac{1}{2}$ unit
12a ² .	Plane Trigonometry	$\frac{1}{2}$ unit
12a ³ .	Plane Analytic Geometry.....	$\frac{1}{2}$ unit
12b.	Chemistry	1 unit
12c.	Botany.....	1 unit
12d.	Zoology	1 unit
12e.	Physical Geography	1 unit
12f.	Physiology	1 unit
12g.	General Science	1 unit
13a.	Mediaeval and Modern History.....	1 unit
13b.	English History	1 unit
14a.	Advanced English	1 unit
14b.	Advanced English	1 unit
15a ¹ .	Elementary French. One-year	1 unit
15a ² .	Elementary French. Two-years	2 units
15a ³ .	Intermediate French. Third year ...	1 unit
15a ⁴ .	Advanced French. Fourth year.....	1 unit
15b ¹ .	Elementary German. One-year.....	1 unit
15b ² .	Elementary German. Two-years	2 units
15b ³ .	Intermediate German. Third year...	1 unit
15b ⁴ .	Advanced German. Fourth year	1 unit

- 15c¹. Elementary Spanish. One-year..... 1 unit
- 15c². Elementary Spanish. Two-years..... 2 units
- 15c³. Intermediate Spanish. Third year... 1 unit
- 15c⁴. Advanced Spanish. Fourth year..... 1 unit
16. Freehand Drawing 1 unit
Two years, four hours a week.
17. Geometrical Drawing 1 unit
- 18a. Mechanical Arts $\frac{1}{2}$ to 3 units
Woodwork, forgework, molding, machine shop practice, plumbing, electrical work. Not more than 1 unit for any one. Each unit represents a year's work, 10 periods a week.
- 18b. Applied Art $\frac{1}{2}$ to 1 unit
Clay modeling, wood carving, art metal work, etc., with power of designing the article to be produced. Each unit represents a year's work, 10 periods a week.
- 18c. Clothing 1 to 2 units
Sewing and dressmaking, with design and the study of materials, combined with problems of purchasing. Each unit represents a year's work, 10 periods a week.
- 18d. Food Preparation 1 to 2 units
Cooking, with emphasis on the fundamental principles of physics and chemistry which underlie the work. Elementary dietetics and nutrition, with problems of purchasing. Each unit represents a year's work, 10 periods a week.
- 18e. Shelter $\frac{1}{2}$ unit
Housing, separate and collective, with elementary problems of equipment, management, and purchasing. Each unit represents a year's work, 10 periods a week.
- 19a. Agriculture 1 unit
A course based on plant study. It should include instruction in the elementary and fundamental principles of biology, including physiology and bacteriology, chemistry, physics, and physical geography, these principles to be taken up in connection with the study of the growth and development of the plant, and of its environment.
- 19b. Dairying $\frac{1}{2}$ unit

- 19c. Live Stock. Year course..... 1 unit
Types and breeds of live stock. Stock judging,
care and management.
- 19c¹. Live Stock. Short course in 19c.... $\frac{1}{2}$ unit
- 19d. Poultry $\frac{1}{2}$ unit
Types and breeds. Care and management.
- 19e. Horticulture 1 unit
The work should include study of the fruits and
vegetables of California, and especially of the
pupil's home region as to varieties, methods of
growth, cultivation, improvement, and marketing.
To be preceded by 12c, or by either 19a or 12g
plus biology.
- 19e¹. Horticulture. Short Course in 19e... $\frac{1}{2}$ unit
- 19f. Farm Mechanics, Farm Architecture
and Farm Management 1 unit
- 19f¹. Farm Mechanics, Farm Architecture,
and Farm Management. Short
course in 19f $\frac{1}{2}$ unit
- 20a. Economic Geography $\frac{1}{2}$ unit
- 20b. Commercial and Industrial History.. 1 unit
- 20c. Bookkeeping 1 unit
Double entry. Ten periods a week, one year.
- 20d. Stenography and Typewriting...1 or 2 units
Not more than one-fourth to be typewriting.
- 21a. Sight-singing and Dictation..... 1 unit
Ability to read, without hesitation, at sight, in
good rhythm, a given simple melody in any com-
monly used key. Ability to write in musical
notation (F and G clefs), marking proper meter
(2, 3 or 4), any simple melody when played or
sung at dictation.
- 21b. Symbols and Terminology of Musical
Notation and Elements of Harmony 1 unit
Should be preceded by 21a.
- 21c. Instrumental or Vocal Technique.... 1 unit
Pianoforte, Violin, or Voice. Exceptional tech-
nique upon any instrument in the orchestra may
receive similar credit.
- 21d. History of Music 1 unit

REQUIREMENTS FOR GRADUATION

No student is permitted to graduate who has not spent at least one year in resident study at the College.

All conditions must have been removed at least six weeks previous to the day of graduation.

The unit employed in reckoning college credit is one exercise per week in one subject continued through a semester. One hundred and twenty-four units in addition to *Physical Training are required for graduation, sixty-four to be completed normally in the Freshman and Sophomore years and sixty in the Junior and Senior. In certain clearly defined cases a subject counted for admission may be allowed to take the place of a college requirement, but not to diminish the total number of units required for a degree.

The following subjects are prescribed in all courses leading to a degree:

†Biblical Literature	8 units
Rhetoric and Composition.....	6 units
English Literature	6 units
§French, German, or Spanish.....	14 units
Natural Science	6 units
History	6 units
Psychology	3 units
Logic	3 units

* Physical Training will not be required of Freshmen and Sophomores in 1914-15, owing to unsettled conditions on the new campus.

† A two-hour course either the first or the second semester of each year.

§ Only six units if the language chosen has been pursued two years in the high school. For those expecting to go beyond the master's degree in post-graduate work, French and German are indispensable.

In addition, every student is expected to choose two closely allied departments in which to carry his investigations beyond the elementary stage. These two departments may be Economics and History, Mathematics and Physics, Physics and Chemistry, Chemistry and Zoology, or any two of the following: English, French, German, Spanish, Greek, Latin, History.

From the two departments thus chosen, Upper Division courses amounting altogether to eighteen units must be completed before graduation. Their prerequisites, found among the Lower Division courses, are to be completed for the most part in the Freshman and Sophomore years.

For the remainder of the course, the student is allowed full freedom of choice, subject always to the prerequisites named under "Departments of Instruction."

Degrees

Any student completing the above requirements with an average grade of 3.5, and in other ways maintaining an honorable record to the end of his course, will be granted the degree of A.B. or B.S., according to the departments in which he has specialized.

DEPARTMENTS OF INSTRUCTION

A different system of numbering courses is introduced in this catalogue from the one followed in previous years.

Any number from 1 to 20 inclusive indicates a Lower Division course. Any number higher than 20 indicates an Upper Division course. Ordinarily, first semester courses have odd numbers, and second semester courses have even numbers. But an odd number is also used where the course may be taken either semester. Two numbers with a hyphen between, as 1-2, indicate a course which continues through the year. L added to a number means a laboratory course.

Where a course was numbered differently under the old system, the old number is added in parenthesis just under the new. This is done for convenience in consulting the records and in transferring credits.

BIBLICAL LITERATURE

Professor Kellogg

1. Pentateuch.

The five books of Moses are studied with a view to the mastery of the facts recorded: the creation of the world and of man, the entrance of sin, the beginnings of redemption, of national life, of the covenant people. The Mosaic Law is studied in relation to the "better covenant" to follow.

2 hours, first semester.

2. Historical Books of the Old Testament.

This course is a continuation of Course 1, and carries the student through the period of the Conquest, the Commonwealth, and into the time of the Kingdom.

2 hours, second semester.

4. Pauline Epistles.

- (3) Advanced work is undertaken in synthetic study of the Epistles, chiefly Romans. Analysis of material and exposition of fundamental Christian truth as held historically by the church is undertaken from the text of the Epistles.

2 hours, second semester.

5. Jeremiah and the Minor Prophets.

- (4) These books are studied with particular reference to the political situation of the times which they portray. The immediate message and the messianic message are discriminated. The prophets were the statesmen of the Theocracy. Omitted in 1914 and 1915.

2 hours, first semester.

7. The Book of Isaiah.

- (5) This massive prophecy is studied in its historical relationships and particularly in its messianic messages.

2 hours, first semester.

8. Life of Christ.

- (7) This study of the Gospels is designed to cover not merely the mechanical outline of the life of our Lord, but deeper teachings of His ministry and message, His death and resurrection. Omitted in 1914 and 1915.

2 hours, one semester.

9. The Acts and the Earlier Epistles.

- (8) The transition from the period covered by the Gospels to the period when by means of Epistles the churches are instructed in mature Christian truth is covered by the Acts. This book and certain of the earlier Epistles are studied with a view to the mastery of facts which are formative in the beginning of church history. Omitted in 1914 and 1915.

2 hours, one semester.

10. The Poetry of the Bible.

- (11) This course involves the study of songs commemorative of deliverance from enemies, the psalms of historical summary, the messianic psalms, and songs of religious experience. Omitted in 1914 and 1915.

2 hours, one semester.

11. The Post-Captivity Period.

- (14) The return from Babylon and the period between the Testaments is covered by a study of the post-captivity books and other historical sources. Omitted in 1914 and 1915.

2 hours, first semester.

12. The Bible and Historic Faith.

This course assembles the testimony of the Scriptures on the fundamental teachings of the church in all ages. The doctrines of God, of man, of sin and redemption are studied as they lie imbedded in the Bible records.

2 hours, second semester.

13. The New Testament in Greek.

Selections from Gospels and Epistles. Prerequisite, one year of Greek.

2 hours, first semester.

14. Hebrews and the Shorter Epistles.

- (13) The ultimate exclusion of Christian Jews from the temple worship calls forth the book of Hebrews, a book of "better things" than those connected with the temple worship. The fulfillings of the ritual are traced in this course, and certain of the later epistles are studied.

2 hours, second semester.

BIOLOGY

Professor Esterly
Professor Eggleston

Zoology

Professor Esterly

Lower Division Courses**1-2. Principles of Zoology.**

- (1) The scope of this course is indicated by the name. Systematic zoology, morphology, and physiology are considered in the first semester, and topics of general interest as well as facts and theories connected with various other subjects in the science are taken up in the second semester. Instruction is by means of lectures and written quizzes, papers upon assigned topics, and outside reading.

3 hours, throughout the year (6 units).

1L. General Zoology.

- (2) A laboratory course, in which several invertebrate types are studied, and the shark among vertebrates. Course 1L must be taken by all who expect to pursue advanced courses in zoology.

Prerequisite, Course 1-2 or its equivalent completed or in progress.

2 laboratory periods, first semester (2 units).

2L. General Zoology.

- (3) A laboratory course, intended to give some insight into vertebrate embryology, histology and anatomy. The development of the frog, toad, or salamander is followed, and the salamander and pigeon, one or both, are used in dissection.

Prerequisite course, 1L.

2 laboratory periods, second semester (2 units).

6L. Field Zoology.

- (7) Principally a laboratory or field course, the aim of which is to enable students to become acquainted with the higher vertebrates, especially the birds inhabiting this region. Not given to less than five students, nor more than ten.

Prerequisite, at least Zoology 1-2.

1 afternoon in the field weekly, second semester (1 unit).

8. Human Physiology.

Lectures, quizzes, and experimental demonstration by means of modern apparatus, preparations and models.

Prerequisite, Course 1-2.

3 hours, second semester (3 units).

Upper Division Courses**21. Anatomy of Vertebrates.**

- (4) Lectures and laboratory. The course aims to cover the higher vertebrate groups in a comprehensive way. The cat is the principal subject of dissection.

Prerequisite, Courses 1-2, 1L, and 2L.

2 laboratory periods and 2 hours of lectures or recitations, first semester (4 units).

22. Cytology and Histology.

- (5) Lectures and laboratory. The animal cell is studied in its various phases of activity, and the microscopical anatomy of tissues and organs of vertebrates is taken up. There is constant practice in the use of reagents and stains, and in the preparation of mounts and series of sections for the microscope. Not given in the same year with Course 24 Omitted in 1914-1915.

Prerequisite, Courses 1-2 and 21, or equivalents.

2 laboratory periods and 2 hours of lectures or recitations, second semester (4 units).

24. Embryology.

- (6) Lectures and laboratory. The development of vertebrates is studied by means of a textbook and outside reading. There is constant practice in the laboratory in embryological methods, the objects of study being the chick and the pig. Not given in the same year with Course 22. Given in 1914-1915.

Prerequisite, Courses 1-2, 1L-2L, and 21, or equivalents.

2 laboratory periods and 2 hours of lectures or recitations per week, second semester (4 units).

Note: One additional unit will be given for Course 22 or 24 if a satisfactory paper is written, on an assigned topic which will involve some original work on the part of the student.

Botany

Professor Eggleston

1. Cryptogamic.

The study of algae, fungi, mosses, and ferns.

2 hours of lectures and 2 two-hour laboratory periods, first semester (3 units).

2. Phanerogamic.

The study of the structures, functions, and families of flowering plants.

2 hours of lectures and 2 two-hour laboratory periods, second semester (3 units).

3L-4L. Economic Botany.

- (3) The principles of Botany applied to agriculture, horticulture, and forestry. The approval of the instructor is necessary for admission to this course.

Prerequisite, Course 2.

1 three-hour laboratory period, throughout the year (2 units).

CHEMISTRY

Professor Chandler

Lower Division Courses

1-2. General Chemistry.

- (1 I) For those without entrance Chemistry. Meets twice a week with Chemistry 3-4 for lectures, and once a week separately for recitation and special instruction. Smith: "Chemistry for Colleges."

3 hours, throughout the year (6 units).

1L-2L. General Chemistry Laboratory.

- (2) Laboratory courses to accompany Chemistry 1-2. Smith and Hale: "Laboratory Manual of General Chemistry."

1 laboratory period, throughout the year (2 units).

3-4. General Chemistry.

- (1 II) For those with entrance Chemistry. Meets twice a week with Chemistry 1-2 for lectures, and once a week separately for lectures and recitations in the theory and practice of Qualitative Analysis. Smith: "Chemistry for Colleges." Stieglitz: "Qualitative Chemical Analysis," Part I.

3 hours throughout the year (6 units).

3L-4L. Qualitative Analysis.

- (3) Laboratory courses to accompany Chemistry 3-4. Stieglitz: "Qualitative Chemical Analysis." Part II.

2 laboratory periods, throughout the year (4 units).

5L-6L. Quantitative Analysis.

- (4, 5) Practice in the general methods of gravimetric, volumetric and electrolytic determinations, with occasional lectures upon the principles involved. Talbot: "Quantitative Chemical Analysis."

Prerequisite, Course 4L.

3 laboratory periods, throughout the year (6 units).

Upper Division Courses

21-22. Organic Chemistry.

- (6) Lectures and recitations on the chemistry of the aliphatic and aromatic compounds. Perkin and Kipping: "Organic Chemistry."

Prerequisite, Course 6L, but may be taken as a Lower Division course with Chemistry 1-2 as the only prerequisite.

2 hours, throughout the year (4 units).

21L-22L. Organic Chemistry Laboratory.

- (7) Preparation and reactions of typical organic compounds. Jones: "Laboratory Outline of Organic Chemistry."

Prerequisite, Course 21-22 completed or in progress.

1 laboratory period, throughout the year (2 units).

23-24. Industrial Chemistry.

- (9) Lectures and recitations. To alternate with Course 25-26. Rogers and Aubert: "Industrial Chemistry." Omitted in 1914-1915.

Prerequisite, Course 6L, but may be taken as a Lower Division course with Chemistry 1-2 as the only prerequisite.

2 hours, throughout the year (4 units).

25-26. Physical Chemistry.

- (8) Lectures and recitations in the field of Physical and Electro-Chemistry. To alternate with Course 23-24. Bigelow: "Theoretical and Physical Chemistry." Le Blanc: "Electro-Chemistry." Given in 1914-1915.

Prerequisite, Course 6L.

2 hours, throughout the year (4 units).

27L. Advanced Chemistry Laboratory.

- (10) Special methods of Quantitative Analysis, including water, gas, oil, feed, food, and electrolytic analysis; assaying; organic and inorganic preparations; physical chemistry measurements. The student may choose from these subjects, and so fit himself for technical or research work.

Prerequisite, Course 6L.

1 or more laboratory periods, one semester.

DRAWING

Instructor Westcott

Instructor Sharp

The courses offered will enable students preparing for engineering or other professions to obtain the necessary foundation work in both technical and freehand drawing before taking up their specialized studies. The value of drawing for the purpose of culture is also strongly emphasized, the freehand work and elementary technical courses being particularly recommended. For students preparing for high school teaching, supplementary work with additional credit can be arranged.

Technical Drawing Courses

Instructor Westcott

1. Instrumental Drawing.

A. Linear drawing, lettering, geometrical problems and constructions, mathematical curves.

Open to all.

3 hours, either semester (1 unit).

B. Elementary principles of projection, working drawings, dimensioning, blue-print reading, shop sketching. A condensed general course for students taking but one year of drawing and for those taking freehand courses.

Prerequisite, Course 1A.

3 hours, either semester (1 unit).

C. Line ruling, lettering, tabulating, curve plotting, charts. An individually arranged course for students of commerce or other subjects where linear drawing is required.

Open to all.

3 hours, either semester (1 unit).

3-4. Orthographic Projection.

(2) Problems in projection, intersection of solids, development of surfaces. Application of the foregoing principles to working drawings, isometric projection, shop sketching. This course is suitable for those who desire a working knowledge of mechanical drawing but who may not find it desirable to take the more extended course in Descriptive Geometry.

Prerequisite, Course 1A.

3 hours, throughout the year (2 units).

5-6. Descriptive Geometry.

- (3) **A.** Basic principles, problems on point, line and plane, curved surfaces, sections, intersections.

B. Shades, shadows and perspective.

This subject is a requirement in all architectural and engineering courses. From one to three hours per week are devoted to recitation or lectures, the balance to work at the drawing board.

Prerequisite, Courses 1A and 1B or Course 3-4; Mathematics 2.

6 hours, throughout the year (6 units).

7-8. Machine Drawing.

- (4) Machine details, bolts and nuts, screw threads, machine movements, cam, lever and link, spur and bevel gears. Complete shop drawings of machines, assembly drawings, tracings, blue prints, titles.

Prerequisite, Course 3-4 or 5-6.

3 hours, throughout the year (2 units).

9-10. Architectural Drawing.

- (5) A course familiarizing the student with the technical terms used in architectural practice and building construction, the principles of plan drawing and detail. The work may be varied to suit the special needs of the student, the object being to provide a thorough foundation of elementary knowledge in the subject upon which to base advanced work. The classroom work is supplemented by lectures on drafting room practice, visits to the office of some architect and the inspection of buildings under construction.

Prerequisite, Course 3-4 or 5-6.

3 hours, throughout the year (2 units).

11-12. Statics—Graphic and Algebraic.

- (6) The analysis of statical problems by both graphic and algebraic methods. The problems advance from simple forms of composition and resolution of forces to the complex application of those principles in the determination of strains in frames such as bridge and roof trusses, girders, the cantilever, etc.

Prerequisite, Courses 1A and 1B, and Mathematics 1.

4 hours, throughout the year (4 units).

13. Shades, Shadows, Instrumental Perspective.

Theory and practice.

Prerequisite, Course 1B or 3-4.

4 hours, either semester (2 units).

Freehand Drawing Courses

Instructor Sharp

1-2. Elementary Freehand Drawing.

Drawing in pencil, pen and ink, and charcoal, from models and still life, outdoor sketching, the principles of light and shade, and perspective.

Open to all.

3 hours, throughout the year (2 units).

3-4. Landscape and Architectural Sketching.

Sketching from nature, architectural subjects, drawing from memory, composition. This course is recommended as a preparation for Course 7-8.

Prerequisite, Course 1-2.

3 hours, throughout the year (2 units).

5-6. General Drawing and Design.

In this course the option is given of selecting work of a broadly cultural character or of a more technical nature in the field of applied art and design. Details of the work must be arranged in advance with the instructor. As much latitude will be permitted as is consistent with thoroughness. Some suggested topics are: Figure and landscape sketching, advanced work in black and white and colored media, study of natural forms with application of same to design, conventional ornament, decorative and industrial design (stencil, fabrics, art craft, illumination, etc.).

Prerequisite, Course 1-2.

3 or 6 hours, throughout the year (2 or 4 units).

7-8. Architectural Rendering.

Pen, pencil, water color, and crayon as media. Perspective (lineal and aerial). Landscape and foreground composition.

Prerequisite, Course 1-2; Technical Course 13 completed or in progress.

3 or 6 hours, throughout the year (2 or 4 units).

9. Lettering.

Freehand, instrumental, and ornamental lettering, round writing, illuminating.

Open to all.

3 hours, either semester (1 unit).

ECONOMICS

Professor Wright

Professor Cleland (Department of History)

Mr. Johnston

Students who major in this department will be required to take History 1-2 and 3-4 as a minor. A thorough reading knowledge of French, German, or Spanish is also essential, and should be regarded as an integral part of the work.

Lower Division Courses

1-2. Principles of Economics.

- (1) An introductory course dealing with modern economic theories and practical problems. The production and the consumption of wealth, the distribution of wealth among the agents of production, the principles and problems of exchange. This course is prerequisite to all Upper Division courses in Economics.

3 hours, throughout the year (6 units).

Professor Wright.

3. Physical Geography.

- (2) A study of the physical environment of man. The changes and economic relations of land forms. The factors which control weather and climate.

3 hours, first semester.

Professor Wright.

4. Economic Geography.

- (3) A study of the relation of environment to production and trade, including man's reaction upon his environment. Special attention will be paid to the elements of industrial greatness of the United States, Great Britain, and Germany.

Prerequisite, Course 3, or admission subject 12e.

3 hours, second semester.

Professor Wright.

5-6. Accounting.

- (5) Fundamental theory and practice of accounts. Theory and practice of auditing. Working papers and reports.

2 hours of lecture and recitation, 1 laboratory period, throughout the year (6 units).

Mr. Johnston.

Upper Division Courses

History 1-2 and Economics 1-2 are prerequisite to all Upper Division courses in this department.

21-22. Money and Banking.

- (10) The fundamental principles of monetary theory, the history and theory of banking, and the discussion of current problems and recent legislation.

3 hours, throughout the year (6 units).

Professor Wright.

23-24. Elements of Jurisprudence.

- (12) A study of the principles that underlie the "formal science of positive law," and of their historical development. Some attention will be paid to the rudiments of commercial law.

2 hours, throughout the year (4 units).

Professor Cleland.

25. Economic History of the United States.

- (13) A study of the economic development of the American people. Emphasis will be laid upon the economic life of colonial times, the influence of westward expansion, and the causes and tendencies of present day conditions. Omitted in 1914-1915.

3 hours, first semester.

26. Public Finance.

- (14) A study of the theories and methods of taxation. Attention will be paid to the collection and disbursement of public funds by federal, state, and local authorities, and by European governments.

3 hours, second semester.

Professor Cleland.

27. Corporation Finance.

- (15) The place of the corporation in modern industrial organization. Special attention will be paid to corporate organization and management. The evils of corporate organization. Public policy toward corporations. Recent legislation. Given alternately with Course 29. Omitted in 1914-1915.

3 hours, first semester.

28. Modern Industrialism.

- (16) A critical study of the problems arising from present industrial conditions—the relation of labor and capital, combination and monopoly, legislation and court decisions. Given alternately with Course 30. Omitted in 1914-1915.

3 hours, second semester.

29. Development of Economic Thought.

It is the aim of this course to strengthen the student's grasp of economic principles by a study of the development of thought in the economic field within modern times. This course is recommended for those who plan to take Course 30.

3 hours, first semester.

Professor Wright.

30. Advanced Economics.

A critical study of Marshall's "Principles of Economics" and the recent works of other representative economists. This course is designed as a natural complement to course 29.

3 hours, second semester.

Professor Wright.

31 Insurance.

- (4) The economic principles of insurance. The history and financial development of life insurance. A brief survey of the practice of fire, marine, social insurance, etc. Omitted in 1914-1915.

3 hours, first semester.

32. Statistics.

- (11) An elementary course, including the history, theory, and methods of statistics. Practice in compiling, plotting, and interpreting statistics. Omitted in 1914-1915.

3 hours, second semester.

33. Constitutional Government.

The nature and operation of constitutional government, with especial reference to the political institutions of England and the United States.

3 hours, first semester.

Professor Cleland.

35-36. Advanced Accounting.

A consideration of the more complicated problems of accounting, cost accounting and auditing.

Prerequisite, Course 5-6.

2 hours of lecture and recitation, 1 laboratory period, throughout the year (6 units).

Mr. Johnston.

EDUCATION

Professor Cook

1. History of Education. Earlier Period.

The course includes a brief study of prehistoric man and the probable beginnings of education, considers the intellectual conditions of ancient nations, and investigates the significance to civilization of the dark ages. Lectures, text, and supplementary reading. To alternate with Course 3.

Prerequisite, Junior standing.

3 hours, first semester.

2. Science of Education.

- (3) The object of this course is a study of the individual. The forces contributing to his welfare are considered, emphasis being placed upon the laws of his response to guidance and training for the development of his life and character for service. Lectures and supplementary reading. To alternate with Course 4. Given in 1914-1915.

Prerequisite, Junior standing.

3 hours, second semester.

3. History of Education. Later Period.

- (2) The period from the renaissance to the present time is covered, particular attention being devoted to great thought movements and their bearing upon civilization and the advancement of learning. Lectures, text, and supplementary reading. To alternate with Course 1. Given in 1914-1915.

Prerequisite, Junior standing.

3 hours, first semester.

4. Philosophy of Education.

This course will include a study of the aim, the meaning, and the individual and social aspects of education, educational values, the curriculum, correlation of studies, interest, attention, the art of study. Text, lectures and supplementary reading. To alternate with Course 2.

Prerequisite, Junior standing.

3 hours, second semester.

ENGLISH

Professor Shearin

Professor Odell

Professor Cunningham

Lower Division Courses**A. Elementary Composition.**

To remove deficiencies in the English of the preparatory course. Must be passed and the fact recorded before any student will be ranked as a Junior. May be passed in any one of three ways: (a) By showing proficiency in the subject in connection with the work of English 1-2 or 3. (b) By making satisfactory improvement in connection with the work of English 1-2 or 3. (c) By taking a course in the subject. Any student failing to pass the requirement in one of these ways before the middle of the Sophomore year will be registered in English A for the following semester.

1 hour, second semester (no credit).

Professor Odell.

1-2. Rhetoric and Composition.

- (1) Expository and editorial paragraphing daily. Fortnightly essays in simple description, narration, exposition, and argumentation. Section 1: The elements and principles of style. Section 2: A thorough drill in the writing of a correct sentence. Required in all courses.

2 hours, throughout the year (4 units).

Professor Odell.

3. Advanced Composition.

- (2) Exposition and argument. Study of models and text. Daily practice, oral and written, in the preparation and presentation of material. Required in all courses.

Prerequisite, Course 1-2.

2 hours, first semester.

Professor Shearin.

4. History of the English Language.

- (3) Historical English grammar, with illustrative selections from Old and Middle English Literature.

2 hours, second semester.

Professor Shearin.

5. Early Nineteenth Century Prose.

Lamb, DeQuincey, Landor, Macaulay, and their contemporaries. A study of representative works of these writers, with special reference to qualities and varieties of prose style. Designed particularly to fit students for the more advanced courses in literature. Required alternately with Course 6.

3 hours, first semester.

Professor Odell.

6. Victorian Prose Writers.

Carlyle, Ruskin, Arnold, Stevenson and their contemporaries. Required alternately with Course 5, to which it is similar in aim and method.

3 hours, second semester.

Professor Odell.

7. Victorian Poets.

Tennyson, Browning, Rossetti, Morris, Swinburne. Emphasis on the elements of poetic form and poetic criticism. Introductory to more advanced courses in poetry. Required in all courses.

3 hours, either semester.

Professor Cunningham.

9. Public Speaking.

(8) Practice in declamation and other forms of public address, with some study of the principles of vocal expression.

Prerequisite, Course 3.

2 hours, first semester.

Professor Shearin.

10. Oral Debate.

(9) Written and oral work. Analysis, brief-making, and debating. The class is divided into two sections, each section debating once a week on a question previously assigned.

Prerequisite, Course 3.

2 hours, second semester.

Professor Shearin.

Upper Division Courses

Courses 1-2, 3, and 7, together with either 5 or 6, are prerequisite to all Upper Division courses.

21. Early Nineteenth Century Poets.

- (11) Wordsworth, Coleridge, Byron, Shelley, Keats.
A study of the romantic movement of the early part of the nineteenth century.

3 hours, first semester.

Professor Cunningham.

22. The Elizabethan Age and the Puritan Period.

- (15) A course in the poetry of the period, with emphasis on the work of Spenser and Milton. Given alternately with Course 28. Given in 1914-1915.

3 hours, second semester.

Professor Cunningham.

23. The Evolution of the Drama.

Outline of the rise of the drama: liturgical forms; folk-plays; scholastic types; masques, etc.; Shakespeare's predecessors.

3 hours, first semester.

Professor Shearin.

24. Shakespeare.

- (12) The principal plays read chronologically, with special attention to the development of Shakespeare's mind and art.

3 hours, second semester.

Professor Shearin.

25. Earlier Nineteenth Century Novelists.

- (13) Jane Austen, Scott, Dickens, Thackeray, George Eliot. Given alternately with Course 31. Given in 1914-1915.

3 hours, first semester.

Professor Odell.

26. The Short Story.

- (14) A course in short-story writing, based on a study of the masterpieces of the art, with special reference to principles of construction.

2 hours, second semester.

Professor Odell.

27. Thesis.

- (18) In connection with any of the Upper Division courses, the student may, with the permission of the instructor, write a thesis embodying some piece of research.

1 unit, either semester.

Professor Shearin.

28. Restoration and Eighteenth Century Literature.

- (16) A survey of the leading poets and prose writers from Dryden to Burns, with emphasis on the rise of the romantic school. Omitted in 1914-1915.

3 hours, second semester.

Professor Odell.

29-30. Anglo-Saxon.

- (19) First semester: The outlines of Anglo-Saxon grammar. Bright's Anglo-Saxon Reader is used. Second semester: Beowulf.

During the year, English literature from the beginning to the Norman Conquest.

3 hours, throughout the year (6 units).

Professor Shearin.

31. Later Nineteenth Century Novelists.

- (21) Meredith, Hardy, Stevenson, Howells, Henry James, DeMorgan. Given alternately with Course 25. Omitted in 1914-1915.

3 hours, first semester.

Professor Odell.

32. Chaucer.

- (20) A detailed study of a large number of the Canterbury Tales and other poems.

3 hours, second semester.

Professor Shearin.

33. Browning.

- (22) The study of the poetry of Robert Browning.

3 hours, either semester.

Professor Cunningham.

35. American Literature.

A general survey, with copious readings from Franklin, Freeman, Bryant, Irving, Cooper, Poe, Emerson, Thoreau, Longfellow, Webster, Whittier, Hawthorne, Holmes, Lowell, Whitman, Lanier, Sill, Stedman, Gilder, Hovey, and contemporary writers.

3 hours, first semester.

Professor Odell.

36. American Authors.

A study of the works of one important author each year. Irving, 1914-1915. Poe, 1915-1916.

3 hours, second semester.

Professor Odell.

FRENCH

Professor Bell

Lower Division Courses

1-2. Elementary.

- (1) First semester: Thorough drill in fundamental rules of grammar with daily oral and written exercises. Reading short stories and conversation on text read.

Second semester: Drill on irregular verbs, idioms, elements of syntax. Reading of prose by modern authors. Easy composition. Special attention is given to acquiring a vocabulary. French being a living language, great attention is paid, in this and the following courses, to correct pronunciation and accentuation.

4 hours, throughout the year (8 units).

3-4. Modern Prose and Dramatic Writers.

- (2) First semester: General review of grammar, dictation in French, written and oral composition. Reading: Short stories by modern authors, at least one modern play. Conversation based upon the texts read.

Second semester: Written and oral composition. Reading: One or two modern plays, modern prose. Written resumés in French and practice in conversation.

Prerequisite, admission subject 15a² or Course 1-2.

3 hours, throughout the year (6 units).

Upper Division Courses

21-22. Composition and Classics.

- (3) First semester: Advanced composition. Reading: Prose by Sand, Balzac, Rostand and others. Themes and conversation on works read. Sight translation of prose. Classics by Moliere, Racine and others.

Second semester: Advanced composition. Reading: History of France, conducted in French, with written exercises on assigned topics.

Prerequisite, Course 3-4.

3 hours, throughout the year, (6 units).

23-24. History of French Literature.

- (4) This course is intended to give the student ample practice in French conversation while affording a bird's-eye view of what France has done and is doing in the world of thought. Outside reading of some of the works of certain authors, with written reports, will be required. Difficult composition and a review of grammatical principles will be given from time to time.

Prerequisite, Course 21-22.

3 hours, throughout the year (6 units).

GEOLOGY AND MINERALOGY

Professor Eggleston

1-2. General Geology.

- (1, 2) Lectures and recitations in Dynamical, Structural, and Historical Geology. Some knowledge of Chemistry, Physics, Zoology, and Botany is desirable.

3 hours, throughout the year (6 units).

1L-2L. Laboratory and Field Geology.

- (3, 4) To accompany 1-2. This course will include the laboratory study of rock-specimens, topographic and geologic maps, the construction of profile and geologic sections, and numerous excursions to nearby locations of geological interest. In the second semester, considerable time is devoted to the study of the more important index fossils.

1 three-hour laboratory period, throughout the year (2 units).

3-4. Mineralogy.

- (5, 6) This course includes elementary crystallography, blowpipe analysis, descriptive and determinative mineralogy. The study of crystal models and natural crystals is followed by practice with the blowpipe in the qualitative analysis of minerals. The second semester is devoted wholly to the study of and a drill in the recognition of the more important minerals.

Some knowledge of Chemistry is strongly recommended.

1 hour lecture and 1 three-hour laboratory period, throughout the year (2 units).

GERMAN

Professor Moll

Lower Division Courses

1-2. Elementary German.

- (1) The essentials of grammar; drill in pronunciation; practice in speaking and writing German; dictation and translation at hearing; reading at sight; reading of short, interesting stories.

4 hours, throughout the year (8 units).

3-4. Modern Prose and Poetry.

- (2) Selection from modern prose writers, poems and a drama from either Lessing or Schiller; composition and conversation.

Prerequisite, Admission Subject 15b² or Course 1-2.

3 hours, throughout the year (6 units).

Upper Division Courses**21-22. The Classical Writers of the Eighteenth Century.**

- (3) Dramas of Lessing, Schiller and Goethe; Lyrics and ballads of Schiller and Goethe. Composition and conversation.

Prerequisite, Course 3-4.

3 hours, throughout the year (6 units).

23-24. The Drama of the Nineteenth Century.

- (5) Selected dramas of Kleist, Grillparzer, Heibel, Hauptman, Suderman, and others. Advanced composition. To alternate with Course 25-26.

Prerequisite, Course 21-22.

3 hours, throughout the year (6 units).

25-26. The Novel of the Nineteenth Century.

- (6) Representative novels of Hauff, Freytag, Spielhagen, Heyse, Keller, and others. Advanced composition. To alternate with Course 23-24.

Prerequisite, Course 21-22.

3 hours, throughout the year (6 units).

GREEK

Professor Ward

Lower Division Courses

1-2. Elementary.

- (A) Beginner's book, Xenophon's *Anabasis* I.-IV.
4 hours, throughout the year (8 units).

3-4. Lysias and Homer.

- (B) Easy selections from Lysias, or an equivalent.
Homer's *Iliad*.

Prerequisite, Admission Subject 8b or
Course 1-2.

3 hours, throughout the year (6 units).

5. Euripides.

- (3) *Iphigenia among the Taurians*, and *Alcestis*.
An introduction to Greek tragedy. Study of
meters and the Greek stage.

Prerequisite, Course 3-4.

3 hours, first semester.

6. Thucydides, Demosthenes.

- (4) Thucydides, Book VII. Demosthenes, *Philippics*. Introduction to two important periods
of Greek history. Collateral reading.

Prerequisite, Course 5.

3 hours, second semester.

7. Greek Life and Literature.

A course of lectures on Greek life and literature, supplemented by required reading and written tests. Knowledge of Greek not required.

Open to all students.

2 hours, first semester.

10. Prose Composition.

- (8) Murray. For those preparing to teach Greek in the high schools of California, this course is essential. It should follow Course 5.

2 hours, second semester.

Upper Division Courses

Prerequisite, Course 5 or 6. Two upper division courses are offered each year.

21. Plato.

- (11) Republic. Selections equivalent in amount to the Gorgias. A course valuable not only for students specializing in Greek, but for those pursuing ethics, sociology or education as well. The place of Plato in Greek philosophy.

3 hours, first semester.

22. Aeschylus, Sophocles.

- (14) Aeschylus: Prometheus or Agamemnon.
Sophocles: Oedipus the King or Antigone.

3 hours, second semester.

23. Aristophanes.

- (15) Clouds, Frogs. Comparison of Greek comedy and tragedy. Comedy as a mirror of the times.

3 hours, first semester.

24. Odyssey.

- (16) First twelve books. Special study of Greek mythology. Literary influence of Homer.

3 hours, second semester.

HISTORY

Professor Cleland
Assistant Professor Paul

Lower Division Courses

1-2. Outline History of Western Europe.

(1A, 1B) A survey of the history of Western Europe from the fall of Rome to the nineteenth century. The regular recitation from a text book will be supplemented by frequent written quizzes and a thorough drill in map drawing. Required for graduation.

3 hours, throughout the year (6 units).

Assistant Professor Paul

3. History of England.

(2A) A general view of the political history of England to 1603. Special study of English constitutional history.

Prerequisite, Course 1-2.

3 hours, first semester.

Professor Cleland.

4. History of England.

(2B) A general view of the political history of England from the seventeenth to the twentieth century. Special study of Imperial England.

Prerequisite, Course 3.

3 hours, second semester.

Professor Cleland.

Upper Division Courses

Courses 3 and 4 are prerequisite to all upper division courses in history.

21. American History to 1800.

- (5A) Early explorations and colonizations: The struggle for the continent. Colonial institutions: Causes of separation from the mother country. The beginning of national life.

3 hours, first semester.

Professor Cleland.

22. American History from 1800.

- (5B) A study of national development, with special reference to the influence of westward expansion upon American character and institutions.

3 hours, second semester.

Professor Cleland.

23. Modern European History.

- (6A) A general survey of the history of Europe in the eighteenth century. Special study of the French Revolution and the Napoleonic era.

3 hours, first semester.

Professor Cleland.

24. Modern European History.

- (6B) A general survey of the history of Europe in the nineteenth century. Special study of the development of nationalities.

3 hours, second semester.

Professor Cleland.

25. History of Greece.

- (3) A study of the history of Greece in which special emphasis is laid on the ages of Pericles and Demosthenes. Omitted in 1914-1915.

3 hours, first semester.

Professor Cleland.

26. History of Rome.

- (4) A general survey of the history of Rome to the fifth century. Omitted in 1914-1915.

3 hours, second semester.

Professor Cleland.

HISTORY OF ART

Professor Cunningham

1. History of Art.

Outline history of the development of architecture and sculpture from the earliest times to the present. Class study of lantern pictures. Individual collection of pictures of different periods.

3 hours, first semester.

2. History of Art.

A study of painting from the Renaissance period to the present time. Class study of lantern pictures. Individual collections.

3 hours, second semester.

LATIN

Professor Ward

Lower Division Courses**5. Livy.**

- (1) The larger portion of Books XXI. and XXII. is read, with particular attention to the syntax and Livy's qualities as a writer and historian. Collateral reading on the history of the period.

Prerequisite, Admission Subject 7.

3 hours, first semester.

6. Horace and Cicero.

- (2) Horace: Odes and Epodes. Cicero: De Amicitia or De Senectute. Lyric meters. Political conditions at the beginning of the empire.

Prerequisite, Course 5.

3 hours, second semester.

7. Plautus and Terence.

- (3) Plautus: Captivi and Trinummus. Terence: Phormio. Meters, early forms and constructions, Roman and Greek life.

Prerequisite, Course 6.

3 hours, first semester.

8. Tacitus, Pliny the Younger.

- (4) Tacitus: Agricola and Germania. Pliny the Younger: Selected letters. Investigation of social and political conditions under the empire.

Prerequisite, Course 7.

3 hours, second semester.

9. Prose Composition I.

- (5) For those preparing to teach Latin in the high schools of California, this and the following course are essential.

Prerequisite, Admission Subject 7.

2 hours, first semester.

10. Prose Composition II.

- (6) Prerequisite, Course 5.

2 hours, second semester.

Upper Division Courses

Course 8 is the common prerequisite for all upper division courses in this department. Two of these are offered each year; 23 and 24 will be given in 1914-1915.

21. Horace and Juvenal.

- (10) Horace: Satires and Epistles. Juvenal: Selected Satires.

3 hours, first semester.

22. Catullus, Tibullus, and Propertius.

- (11) Selections. Influence of Alexandrinism. Roman morals. Literary coteries of the times.

3 hours, second semester.

23. Seneca.

- (15) Tragedies: Hercules Furens, Troades, Medea. Comparison with the masters of Greek tragedy, particularly Euripides. Seneca's handling of Greek meters and mythology.

3 hours, first semester.

24. Vergil.

Aeneid VII.-XII. and Georgics, with special attention to the author's poetic art and genius and to the evidences of patronage afforded by his works.

3 hours, second semester.

25. Roman Comedy.

- (12) Plautus: Rudens and Mostellaria. Terence: Andria and Adelphi. Lectures on the Roman drama.

3 hours, first semester.

26. Tacitus.

- (16) Selections from the Annals. Collateral studies in the history of the empire.

3 hours, second semester.

27. Lucretius.

- (17) De Rerum Natura: Books I., III. and V., with extended sight reading in the other three books. The Epicurean system and its poetic treatment at the hands of Lucretius.

3 hours, first semester.

MATHEMATICS AND ASTRONOMY

Professor Allen

MATHEMATICS

Lower Division Courses

1. Plane and Spherical Trigonometry.

- (2) The development of the general formulae of trigonometry. The theory and use of logarithms. The application of trigonometry to numerous problems in plane and spherical mensuration.

Prerequisite, Admission Subjects 2 and 3.

3 hours, first semester.

2. Solid Geometry.

- (1) The properties of straight lines and planes, of dihedral and polyhedral angles, of projections, of polyhedrons, including prisms, pyramids and the regular solids, of cylinders, cones and spheres, of spherical triangles, and the measurement of surfaces and solids.

Prerequisite, Admission Subjects 2 and 3.

3 hours, second semester.

3. College Algebra.

This course includes the development and application of the binomial theorem and of the exponential and logarithmic series, permutations and combinations, and the theory of equations.

Prerequisite, Admission Subjects 2 and 3.

3 hours, first semester.

4. Plane Analytics.

A study of analytic methods, the analytic geometry of the straight line, the circle, and the conic sections, and investigation of the general equation of the second degree.

Prerequisite, Admission Subject 12a² or Course 1.

3 hours, second semester.

6. Surveying.

The department is equipped with a transit, Y level, Gunter's chain, steel tape, leveling rod, planimeter, slide rules, highly graduated protractor, parallel rules, etc. The principles of land surveying, irrigation, and railroad engineering will engage the attention of the class in actual field work, and the reduction of the field notes to plots drawn to scale.

Prerequisite, Courses 1 and 2.

3 hours, second semester.

Upper Division Courses

These will be counted as Upper Division courses only when preceded by 1, 2, 3, and 4, but may be taken as Lower Division courses with the prerequisites named below.

Physics 23-24 and Astronomy 2 may be counted as Upper Division courses in Mathematics.

21. Differential Calculus.

(9) The principles and formulae of differential calculus, and the application to such problems as maxima and minima, indeterminate forms, expansion of series, etc.

Prerequisite, Courses 3 and 4.

3 hours, first semester.

22. Integral Calculus.

- (10) The principles and formulae of integral calculus, with application to problems in integration, such as lengths of curves, areas, volumes, etc.

Prerequisite, Course 21.

3 hours, second semester.

23. Theory of Equations.

- (11) The theory of determinants; the theory, analysis, and solution of higher numerical and algebraic equations.

Prerequisite, Courses 1 and 3.

3 hours, first semester.

24. Higher Analytics.

- (12) A more advanced course than Course 4, including a study of higher plane curves and the elements of solid analytic geometry.

Prerequisite, Course 4.

3 hours, second semester.

ASTRONOMY

1. General Astronomy.

A course in descriptive astronomy. Simple problems and questions, involving the fundamental principles of astronomy. Study of nebulae, planets, and constellations, with the telescope.

Prerequisite, Admission Subject 12a² or Mathematics 1.

3 hours, first semester.

2. Practical Astronomy.

Lectures and observatory work. The determination of time, latitude, and longitude, and the computation of current eclipses and occultation of stars.

Prerequisite, Admission Subject 4b, Mathematics 4, Astronomy 1.

3 hours, second semester.

PHILOSOPHY

Professor Burt

2. Psychology.

- (1) Psychology, descriptive and explanatory. A study of the most general and elementary forms of consciousness. Ladd or equivalent is used as a text. Required for graduation.

Prerequisite, Sophomore standing.

3 hours, second semester.

3. Logic.

- (2) The principles of Deductive and Inductive Logic are studied and applied in practical work. The purpose is so to familiarize the student with the laws of thought that they may be of practical value. Required for graduation.

Prerequisite, Course 2.

3 hours, first semester.

4. Comparative Religions.

- (6) A study of the great religions of the world, emphasizing the divine origin and transcendent value of Christianity as the only religion for the world.

Prerequisite, Sophomore standing.

2 hours, first semester.

21. History of Ancient Philosophy.

- (4A) An examination of the thought of the Greek period with special emphasis upon the systems of Plato and Aristotle. Junior-Senior elective.

3 hours, first semester.

22. History of Modern Philosophy.

- (4B) An examination of the principal systems of modern thought from Bruno to the present day. Junior-Senior elective. Omitted in 1914-1915.

3 hours, one semester.

23. Ethics.

- (3) The history of ethical theory; its importance; the basis for moral obligation and the resultant duties to God and man. Mackenzie or equivalent is used as a text.

Prerequisite, Courses 2 and 3.

3 hours, first semester.

24. Theism.

- (5) A study of the theistic arguments together with an examination of the anti-theistic theories.

Prerequisite, Courses 2 and 3.

3 hours, second semester.

PHYSICAL TRAINING

Joseph A. Pipal, Director

Mrs. Joseph A. Pipal, Director for Women

The indoor work of this department will be suspended for the year 1914-1915, owing to unsettled conditions on the new campus.

Ordinarily it is required of all Freshmen and Sophomores not excused on account of physical disability. On entering college each student is given a thorough physical examination, which forms the basis for special prescriptive work. Students having organic heart trouble or any other weakness which makes it dangerous for them to indulge in vigorous exercise are not allowed to participate in athletic competition or heavy gymnastics.

The course is graded—elementary, intermediate and advanced—thus offering a change of work each year. Under the supervision of the director, students may elect out-of-door athletics in place of indoor gymnastics.

PHYSICS

Professor Wolfe

Lower Division Courses

1-2. General Physics.

- (1) A systematic development of the fundamental ideas and principles of physics is the aim of this course. The lectures include both elementary mathematical treatments and full experimental demonstrations.

Kimball's College Physics, supplemented by Sabine's Laboratory Manual, is used as a textbook. The laboratory work consists of the measurement with standard instruments of such physical quantities as moments of inertia, g (two methods), surface tension, density, elasticity; pitch and speed of sound; specific heat, mechanical equivalent of heat; electro-magnetic, electro-chemical, and electro-thermal equivalents, intensity of the earth's field and magnetic moment; optical constants of lenses and mirrors, indices of refraction, and wave lengths of light.

N. B.—Two extra lectures per week and one extra laboratory period per week through one semester are required of those who have not had high school Physics. This extra work does not count toward graduation.

Prerequisite, Admission Subject 12a², or Mathematics 1 completed or in progress.

3 hours of lectures and recitations and one laboratory period, throughout the year (8 units).

4. Thermodynamics.

- (4A) The relation between heat and other forms of energy are discussed in this course. Instruction will be by lectures and prescribed reading. Edser's "Heat" will be used as text.

Prerequisite, Course 1-2; Mathematics 21-22, completed or in progress.

3 hours, second semester.

Upper Division Courses**21. Optical Measurements.**

- (2A) In this course the theories of geometrical and physical optics are developed, and are verified by exact measurements in the laboratory. Edser's "Light" is the text-book. Omitted in 1914-1915.

Prerequisite, Course 1-2; Mathematics 21-22, completed or in progress.

3 hours of lectures and recitations and 1 laboratory period, first semester (4 units).

22. Electrical Measurements.

- (2B) In this course the lectures deal with the theory of the methods of measurement employed in the laboratory, and with industrial applications. Hadley's "Magnetism and Electricity" is the text-book. Omitted in 1914-1915.

Prerequisite, Course 21; Mathematics 21-22, completed or in progress.

3 hours of lectures and recitations and 1 laboratory period, second semester (4 units).

23-24. Analytical Mechanics.

- (3) This course gives a comprehensive survey of both statics and dynamics, following Hoskin's "Theoretical Mechanics." It is intended for Juniors who have taken calculus, but Sophomores who are taking calculus at the same time may be admitted by consent of the instructor.

Prerequisite, Course 1-2; Mathematics 21-22, completed or in progress.

5 hours of lectures and recitations, throughout the year (10 units).

25. The Electron Theory.

- (4B) The last few years have witnessed discoveries which are rapidly leading to a unitary view of the whole subject of electricity, under the name of the "Electron Theory." These discoveries are taken up and interpreted in this course. The lectures will be supplemented by outside reading.

Prerequisite, Course 1-2; Mathematics 21-22, completed or in progress.

3 hours, first semester.

SOCIOLOGY

Professor Stevenson

All courses in Sociology are elective. They are open to any student who can meet the restrictions as to prerequisites.

1. Elementary Sociology.

A general survey of the facts of society preparatory to the critical study of social theory. The text-book will be supplemented by lectures and readings and by lantern slides that illustrate social classes, customs and institutions and the physical basis of society.

Prerequisite, a year of Economics and Junior standing.

3 hours, first semester.

2. Principles of Sociology.

An introduction to the theory of society. The various conceptions of Sociology; its relation to other social sciences; its special problems and the laws that govern their solution; and incidental discussion of social conditions to establish and to illustrate social theory. Omitted in 1914-1915.

Prerequisite, Course 1 or 4.

3 hours, second semester.

3. Social Pathology.

- (4) A general study of the weaknesses and diseases of society, and the application of sociological principles to charity, criminology, and constructive social work. Los Angeles offers ample opportunity for field work in the many conditions and institutions that illustrate nearly every phase of social health and social disease. Omitted in 1914-1915.

Prerequisite, Course 2.

3 hours, first semester.

4. Social Psychology.

- (3) The nature, formation and manifestations of the social mind, and its reaction upon the individual mind and conduct. Illustrations of phases of the social mind will be sought in contemporary society, and an effort made to interpret them in terms of psychological principles.

Prerequisite, Course 1 or 2.

3 hours, second semester.

5. Charities and Corrections.

A critical study of selected subjects treated less fully in Course 4: preferably, the origin, nature, and treatment of the defective, dependent, and delinquent classes, and an intensive study of specific problems in criminology or in preventive philanthropy. Omitted in 1914-1915.

Prerequisite, Course 3.

2 hours, first semester.

SPANISH

Professor Bell

Instructor McConnell

1-2. Elementary.

- (1) Hills and Ford's Spanish Grammar. Reading of short and easy stories and plays. Doce Cuentos Escogidos; Alarcón, El Capitán Veneno; Valera, El Pájaro Verde; Galdós, Marianela. Composition and conversation.

4 hours, throughout the year (8 units).

Instructor McConnell.

3-4. The Modern Novel and Drama.

- (2) Galdós, Doña Perfecta; Valdés, La Hermana San Sulpicio; Valera, El Comendador Mendoza; Pereda, Pedro Sánchez; Echegaray, El Gran Galeoto. Advanced grammar and composition.

Prerequisite, Admission Subject 15c² or Course 1-2.

3 hours, throughout the year (6 units).

Instructor McConnell.

21-22. Conversation and Composition.

- (3) This course is conducted mainly in Spanish. Current events and some of the best modern novels and dramas will be read and discussed. An opportunity will be given to the students of coming in contact with educated Mexicans who do not know English. This will afford ample opportunity of hearing the Castilian spoken without any attempt at avoiding idioms. Reviews of important points of grammar and written composition will be given as needed.

Prerequisite, Course 3-4.

3 hours, throughout the year (6 units).

Professor Bell.

Schedule of Lectures and Recitations

The schedule of classes for the first semester is shown on the left of the page, that of the second semester on the right. The columns represent the five days in the week from Monday to Friday. The figures stand for the periods in the day at which classes are held, viz.:

- 1 beginning at 8:30 a.m.
- 2 beginning at 9:45 a.m.
- 3 beginning at 10:40 a.m.
- 4 beginning at 11:35 a.m.
- 5 beginning at 12:30 p.m.
- L beginning at 1:30 p.m.

L is a laboratory or field period, equalling three ordinary periods in length. Chapel holds from 9:25 a.m. to 9:40.

The numbers of the courses correspond with those found under "Departments of Instruction." Any number from 1 to 20 inclusive indicates a Lower Division course. Any number higher than 20 indicates an Upper Division course. A number preceding the name of the subject means a first semester course. A number following the name of the subject means a second semester course. One number preceding and another following means a year course. The same number preceding and following means a one semester course which may be taken either semester. The small figures, having the appearance of exponents, indicate sections of classes. Courses with no periods assigned will have their schedule arranged when the classes are formed.

First Semester

Second Semester

M	T	W	T	F		M	T	W	T	F
	1	1		1	1 Astronomy					
					 Astronomy 2.....					
2		2		2	1 ¹ Biblical Lit.					
	2				1 ² Biblical Lit.					
5			5		1 ³ Biblical Lit.					
					 Biblical Lit. 2 ¹	2		2		
					 Biblical Lit. 2 ²		2			2
					 Biblical Lit. 4.....	5			5	
	3		3		7 Biblical Lit.					
					 Biblical Lit. 12....		3		3	
	4		4		13 Biblical Lit.					
					 Biblical Lit. 14....	4			4	
L	3		3	L	1 Botany					
					 Botany 2.....	L	3		3	L
			L		3L Botany 4L.....				L	
3		5		3	1 Chemistry 2.....	3		5		3
		L			1L Chemistry 2L....			L		
3		3		3	3 Chemistry 4.....	3		3		3
	L	L			3L Chemistry 4L....		L	L		
L			L	L	5L Chemistry 6L....	L			L	L
4				4	21 Chemistry 22....	4				4
	L				21L Chemistry 22L....		L			
					25 Chemistry 26.....					
L			L	L	27L Chemistry 27L....	L			L	L

First Semester

Second Semester

M	T	W	T	F		M	T	W	T	F
					..1 Drawing, Freehand 2..					
					..3 Drawing, Freehand 4..					
					..5 Drawing, Freehand 6..					
					..7 Drawing, Freehand 8..					
					..9 Drawing, Freehand 9..					
					..1 Drawing, Technical 1..					
					..3 Drawing, Technical 4..					
L				L	..5 Drawing, Technical 6..	L				L
					..7 Drawing, Technical 8..					
					..9 Drawing, Technical 10..					
					..11 Drawing, Technical 12..					
					..13 Drawing, Technical 13..					
3		3		3	1 Economics 2.....	3		3		3
4		4		4	3 Economics 3.....					
					 Economics 4.....	4		4		4
	3	L	3		5 Economics 6.....		3	L	3	
4			4	5	21 Economics 22.....		4		4	5
2		2			23 Economics 24.....	2		2		
					 Economics 26.....		2	5		2
1	3		3		29 Economics 2.....					
					 Economics 30.....	1	3		3	
	2	5		2	33 Economics 3.....					
	4	L	4		35 Economics 36.....		4	L	4	
					 Education 2.....	1	1			1
	1	1		1	3 Education 3.....					
					 English A.....			5		
2		2			1 ¹ English 2 ¹	2		2		
	2			2	1 ² English 2 ²		2			2
2		2			3 ¹ English 3.....					
	2			2	3 ² English 4.....					
					 English 4.....	2		2		
4		4		4	5 ¹ English 5.....					
	4		4	5	5 ² English 6.....					
					 English 6 ¹	4		4		4
					 English 6 ²		4		4	5
4		4		4	7 ¹ English 7 ¹	4		4		4
	4		4	5	7 ² English 7 ²		4		4	5
	4		4		9 English 8.....					
					 English 10.....	2				2
2		2	1		21 English 9.....					
					 English 22.....	2		2	1	
3		3		3	23 English 10.....					
					 English 24.....	3		3		3
1	3		3		25 English 11.....					
					 English 26.....	3		3		

First Semester

Second Semester

M	T	W	T	F		M	T	W	T	F
1	3		3		29 English 30.....	1	3		3	
					 English 32.....		4		4	
	2	5		2	33 English 33.....		2	5		2
3		3		3	35 English					
					 English 36.....	3		3		3
	1	1	1	1	1 French 2.....		1	1	1	1
3		3		3	3 French 4.....	3		3		3
1	3		3		21 French 22.....	1	3		3	
5	5		5		23 French 24.....	5	5		5	
3		3		3	1 Geology 2.....	3		3		3
	L				1L Geology 2L.....			L		
2	L				3 Geology 4.....	2	L			
	1	1	1	1	1 ¹ German 2 ¹		1	1	1	1
1	3	5	3		1 ² German 2 ²	1	3	5	3	
3		3		3	3 ¹ German 4 ¹	3		3		3
	4		4	5	3 ² German 4 ²		4	4		5
4		4		4	21 German 22.....	4		4		4
5	5		5		23 German 24.....	5	5		5	
	1	1	1	1	1 Greek 2.....		1	1	1	1
1	3		3		3 Greek 4.....	1	3		3	
	4		4	5	5 Greek					
					 Greek 6.....		4		4	5
	2			2	7 Greek					
					 Greek 10.....		2			2
					21 Greek					
3		3		3	1 ¹ History 2 ¹	3		3		3
1	3		3		1 ² History 2 ²	1	3		3	
	4		4	5	3 History					
					 History 4.....		4		4	5
1	3		3		21 History					
					 History 22.....	1	3		3	
3		3		3	23 History					
					 History 24.....	3		3		3
5	5		5		1 History of Art.....					
					 History of Art 2.....	5	5		5	
3		3		3	5 Latin					
					 Latin 6.....	3		3		3
4		4		4	7 Latin					
					 Latin 8.....	4		4		4
2		2			9 Latin					
					 Latin 10.....	2		2		
5	5		5		23 Latin					
					 Latin 24.....	5	5		5	

First Semester					Second Semester					
M	T	W	T	F		M	T	W	T	F
	4		4	5	1 Mathematics					
					 Mathematics 2.....		4		4	5
4		4		4	3 Mathematics					
					 Mathematics 4.....	4		4		4
					 Mathematics 6.....		1	1		1
2		2	1		21 Mathematics					
					 Mathematics 22.....	2		2	1	
1	3		3		23 Mathematics					
					 Mathematics 24.....	1	3		3	
					 Philosophy 2 ¹		1	1		1
					 Philosophy 2 ²	2		2	1	
	1	1	1	1	3 Philosophy					
2		2			4 Philosophy					
					21 Philosophy					
4		4		4	23 Philosophy					
					 Philosophy 24.....	4		4		4
3		3		3	}1 ¹ Physics 2 ¹	3		3		3
L						L				
3	L	3		3		3	L	3		3
3		3	L	3	1 ² Physics 2 ²	3		3	L	3
					1 ³ Physics 2 ³	3		3		3
					 Physics 4.....	1	3		3	
2	1	1	1	1	}23 Physics 24.....	2	1	1	1	1
		2						2		
									2	
1	3		3		25 Physics					
1	3		3		1 Sociology					
					 Sociology 4.....	1	3		3	
	1	1	1	1	1 Spanish 2.....		1	1	1	1
3		3		3	3 Spanish 4.....	3		3		3
4		4		4	21 Spanish 22.....	4		4		4
	1	1		1	1 Zoology 2.....		1	1		1
L	L				1L Zoology					
					 Zoology 2L.....		L	L		
					 Zoology 6L.....				L	
					 Zoology 8.....	3		3		3
1	3	L	3	}	21 Zoology					
	L				 Zoology 24.....	1	3	L	3	
						L				

GENERAL INFORMATION

Registration and Class Standing

Registration. Every student is expected to register before or during the appointed registration days of each semester. Any one registering later than the first Friday of the semester will be charged a registration fee of two dollars. All college bills for the semester are to be settled or arranged for at the time of registration. A certificate of registration, signed by the Registrar and Business Manager, must be presented to the instructor of each class in which the student seeks to be enrolled. No one will receive credit for a course for which he has not been officially registered.

Twelve semester hours is the minimum, and eighteen semester hours in addition to Physical Training the maximum for which a student may register. The semester hour is understood to mean one period in the classroom per week continued through a semester, or three periods in the laboratory.

Classification. The class in which a student is to be ranked is determined by the following scale of credits, each figure being the minimum for standing in the class named:

Freshman—15 entrance units.

Sophomore—24 units of college credit.

Junior—60 units of college credit.

Senior—90 units of college credit.

An average grade of 3.5 in the required number of units is necessary for promotion from class to class.

Marking System. Five passing grades of scholarship are in use, represented by Arabic numerals, as follows: 1 represents the first or maximum grade; 2, the second grade; 3, the third or medium grade, which is the grade of the average student; 4, the fourth grade; 5, the fifth, or minimum passing grade.

Ordinarily, in required Lower Division work, these grades should be distributed about as follows: grades 1 and 5, five per cent. each; grades 2 and 4, twenty per cent. each; grade 3, fifty per cent.; "inc." represents incomplete work; "con." represents a condition, to be removed by examination; F represents a failure, to be removed only by repetition of the course.

While 5 is a passing grade in any subject, yet for class promotion and for graduation the student is required to maintain an average of 3.5 in the necessary number of units. The average maintained by each student will be indicated in his semester reports and become a part of the permanent scholarship records.

The method of finding this average is to multiply the grade obtained in each subject by the number of units with which the subject is credited, add the products, then divide their sum by the total number of units earned in all subjects combined.

Subjects passed with a grade of 5 will not be recommended for credit in transferring to other institutions.

The head of any department may exclude from advanced classes a student, who, in his judgment,

has failed to do satisfactory work in the lower classes.

Class Honors. First Honors are awarded on commencement day to those members of each of the four classes whose average grade for the year equals 1.3; Second Honors to those whose average equals 2.

To be eligible to these honors, one must have at the end of the year:

- a. No failures or unremoved conditions on the year's record.
- b. At least 24 units of college credit earned during the year.
- c. Rank in the next class.

Final Honors. On the same basis as above, Final Honors are awarded to those members of the graduating class who have won Class Honors each of the four years of their course, or whose average for the four years equals the average required for class honors. Students from other institutions entering Occidental not later than the beginning of the Junior year will be eligible to Final Honors, provided, in the judgment of the Committee on Classification, their record for the preceding part of their course equals the standard named above.

Valedictory and Salutatory. The rank of Valedictorian is awarded to that member of each graduating class who stands highest in scholarship average for the entire course.

The rank of Salutatorian is awarded to that member of each graduating class who stands second in scholarship average for the entire course.

Students from other institutions entering Occidental later than the beginning of the Junior year are not eligible to these honors.

ATTENDANCE

The College requires of all students regular attendance at the chapel service and at all the classes to which they belong. A copy of the rules governing attendance may be obtained from the Dean.

REGULATIONS GOVERNING SOCIAL LIFE

The College provides places of residence for the students by means of a system of registered lodging and boarding places. All students must room in places approved by the Faculty. Students are required to keep reasonable hours and to conduct themselves with propriety at all times. A copy of the rules governing the social life of the College may be obtained from the Dean.

PHYSICAL TRAINING AND ATHLETICS

The graded class drill usually required of Freshmen and Sophomores is suspended for the year 1914-1915, owing to unsettled conditions on the new campus. Meantime, increased effort will be put forth to engage as many of the students as possible in outdoor sports, in this way promoting the health of all and adding zest to every other form of college activity. Plans are under way by which it is expected the work of this department will soon be provided for on a larger scale than Occidental has hitherto been able to attempt.

Athletics as a phase of general college life is under the care of the Associated Students, acting in co-operation with the Faculty's Committee on Athletics. On the field, and in all matters affecting individual health, the Physical Director has full charge.

THE THURSDAY ASSEMBLY

The Thursday Assembly (changed from Friday) is a distinguishing feature of Occidental life. At this assembly vital topics are discussed by eminent men and women from all parts of the world. Few lecture courses anywhere provide their patrons a richer or more varied program than that offered to the students of Occidental every week in the year, free of charge, from their own chapel platform. Its value as part of a college course can hardly be estimated. Here are a few names, among many, of those who have given addresses the past year: Ex-Senator Flint, John Balcom Shaw, Mrs. Catherine Booth-Clibborne, James W. Foley, Booker T. Washington, Geo. Sherwood Eddy, Syndie J. H. McCracken, Moderator John Timothy Stone, Robert Freeman, Benjamin Ide Wheeler, Arthur Phelps, Dan Crawford, Geo. L. Spinning, Wm. E. Ritter, Charles W. Fairbanks, Secretary William Shaw.

A special attraction for the coming year will be five lectures by Francis L. Patton, D.D., LL.D., ex-president of Princeton University, on "Fundamental Christianity." These lectures, like all the chapel lectures, will be open to the public as well as to the students.

HIGH SCHOOL CERTIFICATE

Graduates of Occidental may obtain the high school certificate in California on the same conditions as graduates of the State University, conditions which have been thus formulated by the State Board of Education:

High School Certificates may be issued under the provisions of Section 1521, subdivision 2 (a), and Section 1775, subdivision 1 (a), of the Political Code of California, as follows:

To candidates who have received the Bachelor's Degree from a college requiring not less than eight years of high school and college training, and who submit evidence that in addition to the courses required for the Bachelor's Degree they have successfully completed at least one year of graduate study in one of the accredited institutions listed below,* which year of graduate study shall include one half-year of advanced academic study (part of the time, at least, being devoted to one or more of the subjects taught in the high school), and such other time in a well-equipped training school of secondary grade directed by the Department of Education of any one of these universities as may be necessary to fulfill the pedagogical requirements prescribed by this Board.

In lieu of the pedagogical training above prescribed, candidates may submit evidence showing that they are graduates of a California State Normal School, or other Normal School officially recognized by this Board as of equivalent rank, or have taught with decided success as regular teachers or as principals at least twenty months in any reputable school, elementary or secondary.

The institution granting the Bachelor's Degree,, the institution in which the post-graduate academic study is pursued, and the institution in which the pedagogical work is done, shall each certify to the high character of the work accomplished under its direction, and to the personal fitness of the candidate.

*University of California
Catholic University of America
University of Chicago
Clark University
University of Colorado
Columbia University
Cornell University
Harvard University
University of Illinois
Indiana University
Iowa State University
Johns Hopkins University
Leland Stanford Junior
University

University of Texas.
University of Michigan
University of Minnesota
University of Missouri
University of Nebraska
Ohio State University
University of Pennsylvania
Princeton University
University of Southern California
University of Texas,
University of Virginia
University of Washington
University of Wisconsin
Yale University

COLLEGE BILLS**General**

Tuition, each semester.....	\$50.00
Graduation Fee	5.00

Laboratory

Botany 1 or 2.....	\$ 3.00
Botany 3L or 4L.....	1.50
Chemistry 1L, 2L, 21L, or 22L.....	5.00
Chemistry 3L, 4L, 5L, 6L, or 27L.....	10.00
Geology 3 or 4.....	1.50
Physics 1, 2, 21, or 22.....	3.00
Zoology 1L or 2L.....	4.00
Zoology 22 or 24.....	5.00

Special

Late registration (see page 89).....	2.00
Examination at irregular time.....	2.00
Duplicate transcript of record.....	2.00

In addition, a breakage deposit of \$5.00 is required for each laboratory course in Chemistry. The balance remaining at the end of the course will be returned.

All college bills are payable in advance. Five per cent. will be added to all bills of the first semester not paid by November 15th, and to those of the second semester not paid by March 15th.

No payments will be refunded for students who are dismissed or suspended or who leave College for any reason other than illness necessitating absence for more than half a semester. Not more than half the proportionate charges for such a period of absence will be refunded.

MEN'S DORMITORY

Rooms in James Swan Hall are charged for at the rate of \$45 a semester for each occupant, except the two end suites on the top floor, which accommodate one person each and rent at \$60. Heat and light are included in these rates, and the College also supplies furniture and bedding with sanitary laundering of the bedding and complete care of the rooms. Towels are furnished by the young men and go with their personal laundry. Rental is payable in advance, and a deposit of \$5, to be applied on the rental, is required at the time of engaging the room. This deposit will not be returned in case of failure to occupy the room. Where a student is compelled to withdraw on account of sickness a reasonable refund will be made. All damage to room or furniture will be charged to the occupant. The College reserves the right to exclude from James Swan Hall any one who proves to be a disturber or an undesirable character. For description of building, see page 20. Applications for rooms may be sent to the Registrar, Occidental College, Los Angeles.

HOMES FOR YOUNG WOMEN

While no dormitory for young women has yet been erected, several places maintained by private parties afford the chief advantages of dormitory life. One such place, presided over by two former teachers and within three squares of the campus, offers accommodations for ten. Ten more are provided for on the bungalow plan in two cottages situated to-

gether, the lady who owns them living in one. Moreover, quite a number of rooms will be provided in reputable homes, not far from the College, with hundreds of others accessible by trolley. Young ladies from the best families will not lack for safe and refined places in which to make their homes during the four years spent at Occidental.

CAFE

At the College cafe and dining hall wholesome food is served at small cost. Until the erection of a permanent commons, it will be located in Fowler Hall. While it provides a convenient and inexpensive place for meals, it also affords a pleasant social center, especially in the middle of the day.

BOARDING HOUSE REGISTER

A system of registered lodging and boarding houses provides places of residence for all students at a cost varying from \$20 to \$25 per month. New students will be provided on their arrival with a complete list of such places approved by the College.

EXPENSES AND SELF-HELP

The necessary expenses of the student range from \$275 to \$400 a year.

Students who desire to earn their way through college should register with the Employment Bureau conducted by the Christian Associations. Opportunities for self-support among the students are somewhat limited. The number who earn their entire expenses is comparatively small.

SCHOLARSHIPS

The College has a limited number of scholarships available for the relief of deserving students who are unable to pay tuition. In some cases the beneficiary is named by the donor, in others by the President or Board of Trustees. Every candidate for a scholarship must have his application indorsed by some person of recognized standing in his home neighborhood. Any one receiving such aid will be expected to maintain a creditable standing in his classes and to show by his conduct that the assistance has been worthily bestowed. Address all communications regarding these scholarships to the President.

THE HORACE CLELAND SCHOLARSHIP

In addition to those named above, the Horace Cleland Scholarship, recently established by the Alumni Association, is awarded, for the Junior year only, to that member of each class who seems best entitled to it on the general basis of need and merit.

THE CECIL RHODES SCHOLARSHIPS

Competition for these is open to the young men of Occidental. One who passes the qualifying examination held in Los Angeles becomes eligible to appointment for a term of three years as Rhodes Scholar at Oxford, England, an expense fund of \$1500 a year being provided.

STUDENT LOAN FUND

There is a loan fund from which a worthy student in unusual need may borrow at four per cent.

interest a sufficient amount to meet a part or all of his tuition, giving his personal note as security. Such loans can be made only in case of real need and through personal conference with the President. Each applicant must furnish satisfactory references and will be expected to maintain a proper standard of scholarship and conduct.

ORATORICAL AND DEBATING CONTESTS

Intercollegiate Oratorical Contest. An oratorical contest between the colleges of Southern California is held annually. The preliminary contest at Occidental is under the direction of the Associated Students. The winner in this contest represents Occidental in the Intercollegiate. In the last home contest, the first prize was won by Mr. Day Ehrenfeld, '14, and the second by Mr. J. J. Hopkins, '15.

Prohibition Oratorical Contest. Each year an oratorical contest is held under the auspices of the Students' Prohibition League, which is a branch of the Intercollegiate Prohibition Association. The subjects discussed are connected with the work of temperance reform. Two prizes, of \$15 and \$10, respectively, are offered to the winners of this contest by the Temperance Committee of the General Assembly of the Presbyterian Church in the U.S.A. In this year's contest the first prize was awarded to Mr. Day Ehrenfeld, '14, and the second to Mr. E. R. Marsh, '16.

The Southern California Peace Society. An oratorical contest is held annually under the auspices of the Southern California Peace Society. The aim of the society is to bring about international disarmament. The local contest is under the direct charge of the student Oratorical Association, and the winner represents the college in the Intercollegiate Peace Oratorical Contest of Southern California. At the home contest, occurring April 28, the first prize was awarded to Mr. Day Ehrenfeld, '14, and the second to Mr. H. H. Hoyt, '16.

The Triangle Debate. The "Triangle Debate," between representatives of Occidental College, Pomona College and the University of Southern California, was an annual affair, but ended with the past year. Three debates on the same question took place simultaneously. Each institution was represented by six debaters, three of whom supported the affirmative in the home contest, the remaining three supporting the negative at one of the other institutions. In the debate with Pomona, this year, Occidental was represented by H. W. Riley, '15, J. S. Lacey, '15, C. W. Faries, '16; in the debate with the University of Southern California, by J. J. Hopkins, '15, A. P. Watts, '14, F. A. Stearns, '15.

Debate with Redlands University. For three years in succession a debate has been held between representatives of Occidental College and Redlands University, each team being made up of two young men. In the debate of the past year, Occidental was represented by J. T. Bickford, '14, and W. Fowler, '17.

STUDENT ORGANIZATIONS

The Associated Students. The purpose of this organization is to control all student enterprises. All Occidental students are eligible to membership. At its organization, the Associated Students absorbed the Athletic Association, the Oratorical Association, and the Occidental Publishing Company. These enterprises are now under the direct control of a General Manager and under the general control of an Executive Committee, which is composed of the officers of the Association, the General Mana-

ger, and one representative of each of the following interests: Oratory, Athletics, Student Publications, the Alumni, and the Faculty.

All expenditures must be authorized by the Executive Committee; and every month a report of receipts and expenditures, after being duly audited, is published in *The Occidental*.

Christian Associations. The Young Men's and the Young Women's Christian Associations are both represented by strong organizations, being supported by a large majority of the students. The weekly meetings of the Associations are largely attended. Classes for systematic Bible study meet regularly.

Interest in missions is very strong, the Student Volunteer movement being well represented in both Associations.

Each year the Y. M. C. A. sends a delegation to the State conference at Pacific Grove, and the Y. W. C. A. a delegation to Moss Beach.

An important feature of the work of the Associations is the Student Employment Bureau, which is conducted for the benefit of those desiring to earn their expenses during the college year. An Information Bureau is also conducted by the Associations for the assistance of new students at the opening of the college year.

Literary Societies. The students of the College support three active literary societies: the Stevenson and the Lowell, composed of young men, and the Laurean, composed of young women. These societies hold weekly meetings for debating and other literary work.

Glee Clubs. The Men's Glee Club continues to maintain its place among the successful organizations of the College. Besides furnishing the music at various services and exercises of the College, the club regularly makes a vacation trip to a number of the surrounding towns. It contributes in no small degree to the social life of its members and to the musical interests of the College. Membership is based upon ability displayed in competitive trials at the opening of the school year.

The Women's Glee Club, more recently organized, has won an established place in the life of the College and is always spoken of as a favorite attraction. Its concerts, both at home and in the near-by towns, are a pronounced success.

STUDENT PUBLICATIONS

The Occidental, the College newspaper, appears each week of the College year. It is edited and managed by students of the College. An annual, La Encina, is published in May by the Junior class. A handbook of information is issued at the beginning of each year by the Y. M. C. A.

FORM OF BEQUEST

Those intending to devise property to Occidental College are requested to use the following form: "I hereby give, devise and bequeath unto the Occidental College of Los Angeles, State of California, the sum of.....Dollars."

For property other than money the form should be correspondingly varied.

HONORS AWARDED IN 1913

Class Honors

First Freshman:

Ralph Benajah Potter

Second Freshman:

Henry Gudgell Boice

George Wendell Elsey

Marion Lowrie Haskell

Fred French McLain

Charles Taylor Tidball

First Sophomore:

Pearl Margaret Adams

Florence Margaret Moote

Andrew Wilson Stewart

John Jay Hopkins

Second Sophomore:

Frank Seymour Boice

Mae Thompson

Helena Theresa McKelvey

First Junior:

Louise Baxter Boal

Frederick Walton Brown

Anna Almeda Pettit

Second Junior:

Mildred Aiken

John Thomas Bickford

William Fiske Hannaford

Hazel Chatfield Hunt

Katherine Wilma McClung

Arthur Pryor Watts

First Senior:

Christopher Harold Gaskell

Second Senior:

David Bruce Dill

Stella Freeman

William Bush Percival

John Egbert Stevens

William Sharpe Thorndike

Final Honors

No First.

Second:

Stella Freeman

William Sharpe Thorndike

Elizabeth Hamilton McKelvey

Valedictory and Salutatory

Valedictory:

Stella Freeman

Salutatory:

Elizabeth Hamilton McKelvey

DEGREES CONFERRED

in June, 1913

Doctor of Laws

Robert Jones Burdette

Doctor of Divinity

Joseph Albert Stevenson

Master of Arts

Alice Rhea Moore

Bachelor of Arts

Mary Harriet Allen

Howard Weldon Angus

George Winfield Blount

Edward Blake Brier

Mary Coe Culbertson

Dorothea Davis

Stella Freeman

Christopher Harold Gaskell

A. Mary Gillies

Mabel Catharine Gordy

Charles Henry Lewis

Esther McDuff

Elizabeth Hamilton McKelvey

Nora Allen Nelson

William Bush Percival, Jr.

Wellford Seay

Emma Beryl Thacker

William Sharp Thorndike

Edith Lucile Tidball

Lillie E. Wendling

Drury Park Wieman

Lois Hazel Wieman

Leon Yakeley

Bachelor of Science

Chester Boal Bradbeer

David Bruce Dill

Sarah Elizabeth Key

Horace Hoagland McCoy

John Egbert Stevens

DEGREES CONFERRED
at the Quarter Centennial of the College

March 26, 1914

Doctor of Laws

John Timothy Stone
William Shaw

Doctor of Divinity

John Gilbert Blue
George Granville Eldredge
Thaddeus Thackery Creswell
Ernest Freeman Hall
Augustus Bedlow Prichard

OFFICERS OF THE ALUMNI ASSOCIATION

1913-1914

President,

Prof. Robert G. Cleland, '07.

Vice-President,

Bertha Boal, '08.

Secretary,

Mrs. Mary Reiner McClung, '11.

Treasurer,

Harry C. Dane, '02,

1959 West Washington Street,

Los Angeles, Cal.

Alumni Representative,

Executive Committee Associated Students,

Professor Arthur G. Paul, '09.

Alumni Editor of "The Occidental,"

Bess Gardner, '13.

GRADUATE COUNCIL

Term expiring June, 1914:

Dr. Arthur W. Buell, '04
Arthur L. Spring, '08
Bess M. Buck, '08
Prof. Arthur G. Paul, '09
Frank N. Rush, '09

Term expiring June, 1915:

Francis W. Lawson, '12
Bertha Boal, '08
Dr. Isabel Crowell, '02
Philip Dodson, '10
Howard Angus, '13

Term expiring June, 1916:

Prof. Robert G. Cleland, '07
Mrs. Robert Patterson, '11
Daniel S. Hammack, '05
Bess Gardner, '12
Mrs. Mary Reiner McClung, '11

EXECUTIVE COMMITTEE OF THE ASSOCIATED STUDENTS

1913-1914

President	Harry A. Kirkpatrick, '14
Vice-President	Rowena J. Rogers, '14
Secretary	Mildred Aiken, '14
General Manager	Francis W. Lawson, '12
Alumni Representative	Prof. Arthur G. Paul, '08
Editor "The Occidental,"	John A. Henderson, Jr, '14
Athletic Representative	William M. Henry, '14
Oratorical Representative	Paul B. Steintorf, '16
Faculty Representative	Professor Ward

REGISTER OF STUDENTS

1913-1914

SENIORS

Aiken, Mary Mildred.....	Whittier
Akimoto, Katsuji	Los Angeles
Baer, Francis Shaw	Pasadena
Beede, Benjamin Willis	Whittier
Bickford, John Thomas.....	Los Angeles
Brier, William Wallace.....	Los Angeles
Brown, Frederick Walton.....	Pasadena •
Bryan, Edith Sibyl.....	Pasadena
Cohn, Esther	El Rio
Daniell, Margaret Lantz.....	Los Angeles
Ehrenfeld, Day	Pasadena
Eldred, Fred H.	Los Angeles
Hannaford, William Fiske.....	Sierra Madre
Hazlett, Edith May.....	Los Angeles
Henderson, John Alexander.....	Santa Ana
Heninger, Walter M.	Los Angeles
Henry, William Mellors.....	Los Angeles
Hunt, Hazel Chatfield	Los Angeles
Johnson, Helen	Los Angeles
Jones, Thaddeus Crane, Jr.	Pasadena
Keith, Mildred Marie.....	South Pasadena
Kincaid, Grace Dorothea.....	Los Angeles
Kirkpatrick, Harry Allister	Los Angeles
Lawyer, Edwin Briggs.....	South Pasadena
McClung, Katherine W.	Los Angeles
McConnell, William Orr.....	Colorado Springs, Colo.
McDonald, Bruce Harold	Los Angeles
McNary, Hugh Alin	Los Angeles
Moore, Harriet Edith.....	Los Angeles
Pettit, Anna Almeda	Parlier
Petty, Alonzo Ray	Los Angeles

Pratt, Jessie Barnum.....	Los Angeles
Rogers, Rowena Jean.....	Los Angeles
Smith, Louise	South Pasadena
Tamura, Paul	Los Angeles
Taylor, Mildred	Santa Ana
Wallace, Grace Ann.....	Alhambra
Watts, Arthur P.	Los Angeles
Young, Paul Thomas.....	Los Angeles

JUNIORS

Acosta, Faith Ramona.....	Pasadena
Adams, Pearl Margaret.....	Los Angeles
Allen, William Wadley.....	Alhambra
Arrants, Annie	Selma
Beede, Lillian Elizabeth.....	Whittier
Boice, Frank Seymour.....	Pasadena
Bollinger, Glen Harold.....	Hollywood
Bouick, Frank Jackson.....	San Anselmo
Boyd, Gladys Irene.....	Los Angeles
Byram, Roy Mack.....	Santa Ana
Chapman, Leland Stanford.....	Los Angeles
Clark, Ethel	Pasadena
Cunningham, Ada Ruth.....	Denver, Colo.
Doig, Leroy Lowry.....	Santa Ana
Flippen, Florence Danner.....	Orange
Gilchrist, George Riggle.....	Los Angeles
Goff, George Almon.....	San Anselmo
Graham, Winnifred	Los Angeles
Hallenbeck, Wilbur Chapman.....	San Diego
Hayslip, Ralph Stewart.....	Pomona
Hayward, Samuel Thomas.....	Los Angeles
Hopkins, John Jay	Turlock
Johnson, Charles Sale	Azusa
Kemper, Helen Elizabeth.....	Los Angeles
Lacy, James Samuel.....	Huntington Park
LaMott, Willis Church	Hollywood
Lord, Margaret Wallace.....	Alhambra
McBurney, Theodore Chichester.....	Los Angeles

McDermont, Earl Alexander.....	Long Beach
McKelvey, Helena Theresa.....	Los Angeles
Millar, Peter Amerman.....	Brawley
Miller, Nell Adelia.....	Hollywood
Moote, Florence Margaret.....	Los Angeles
Morsey, Thomas Marshall.....	Tacoma, Wash.
Porter, Hannah Fern.....	Glendale
Rapp, Robin	Ventura
Riley, Harold William.....	Los Angeles
Rogers, Marguerite Ada.....	Azusa
Robertson, Lutie	Marshall, Mo.
Sanborne, Dorothy Elizabeth.....	Oakland
Sharp, Mabel Lenora.....	Long Beach
Smiley, Donald Scott.....	Santa Ana
Stearns, Francis Ardell.....	Los Angeles
Stearns, Theodore Le Grande.....	Los Angeles
Stuart, Irene	Los Angeles
Thompson, Myrtle	Orange
Thomson, Mae.....	Los Angeles
Thorne, Frederick Rowe.....	Los Angeles
Thorne, George Webber.....	Los Angeles
Truelson, Mamie Louise.....	Hemet
Weymouth, Mary Demie.....	Amarillo, Texas
Wing, Harold Evan	Los Angeles
Wylie, Emma Grace.....	Los Angeles
Wyngaarden, Herman	Holland, Mich.
Wyngaarden, Martin	Holland, Mich.
Young, Walter Stewart.....	Los Angeles

SOPHOMORES

Annin, William Clement.....	Los Angeles
Baird, Martha	Los Angeles
Beach, Merritt Stephen.....	Indianola, Iowa
Boice, Henry Gudgell	Pasadena
Boring, Nellie Whitmer.....	Los Angeles
Buell, Lester Harvey.....	Montecito
Clark, Clara Lynn.....	Burbank

Converse, Harold Dudley	Corning
Cook, John W.	Los Angeles
Cook, Mable Elizabeth.....	Los Angeles
Crawford, Edwin Dickey.....	Fresno
Creighton, Allen Miller.....	Phoenix, Ariz.
Creighton, John Hayes.....	Phoenix, Ariz.
Creighton, Ruth.....	Pheonix, Ariz.
Daniels, Guy Albert	Azusa
Davidson, Margaret Hampton.....	Pasadena
Dunshee, Frank Gilbert.....	Ventura
Durfy, Margaret	Hollywood
Eichorn, J. Clarence.....	Los Angeles
Faries, Culbert William.....	Los Angeles
Foster, Sidney Francis.....	South Pasadena
Gatch, Sarah Etta.....	Los Angeles
Gooding, Frances	Los Angeles
Goudge, Agnes Mary	Alhambra
Halberg, Earl Lee.....	Los Angeles
Hardy, Faith	Redondo
Harris, Guy Comstock	Pasadena
Haskell, Marion Lowrie.....	Los Angeles
Hayward, Max E.	Los Angeles
Herlihy, Harold Walter.....	Pasadena
Hill, Walter Goodwin.....	Phoenix, Ariz.
Houghton, Ella	Rivera, Cal.
Houghton, Stella	Rivera, Cal.
Hoyt, Howard Hastings	Eagle Rock
Hutchison, Olive Edith	Santa Ana
Keffer, La Verne	San Luis Obispo
Kennedy, Victor A.	Hynes
Key, William Amos.....	Fullerton
Kinney, Douglas	Los Angeles
Kirkpatrick, Paul Harmon.....	Los Angeles
Lockard, Earl Keith.....	Santa Barbara
MacDonald, Henry Mackenzie.....	Pasadena
MacDonald, Hilda	South Pasadena
Marsh, Esbon Rea.....	Hermon
McAllister, Wallace D. B.....	Republic, Mo.

McAulay, Robert Ferrier Burns.....	Anaheim
McClung, Samuel Hudson	Los Angeles
McDearmott, Kenneth F'hillips.....	Pasadena
McGee, Marguerite Graves.....	Pasadena
McIntosh, Donald Harold.....	Los Angeles
McIntosh, Samuel Chester.....	Los Angeles
McKelvey, Katharine Finley.....	Los Angeles
McLain, Frederick French.....	Pasadena
Mier, Millard Moreland.....	Los Angeles
Myers, Helen Williams	Los Angeles
Parker, Warren Harvey.....	Phoenix, Ariz.
Parsons, Helen May.....	Los Angeles
Potter, Ralph Benajah.....	Pasadena
Price, Anna May.....	Los Angeles
Richards, Albert Ernest.....	Vancouver, B. C.
Sanborn, Fern Edna	Sacramento
Shinn, Albert Robin.....	Los Angeles
Smart, Morris Carson	Santa Ana
Smith, Ruth.....	South Pasadena
Smith, Theodore Parker.....	Los Angeles
Squire, Loyd	Downey
Stehman, Henry Miller.....	Pasadena
Steintorf, Paul B.	Calexico
Sumner, Charlotte Louise.....	Alhambra
Tidball, Charles Taylor.....	Santa Ana
Trout, Elsie Lovica.....	Burbank
Walker, Rosamond Johnston.....	Los Angeles
Walk, Walter Albert.....	Downey
West, Margaret Donaldson.....	South Pasadena

FRESHMEN

Allin, Hazel	Pasadena
Angell, Dorothy Blythe.....	Oleander
Baker, Harrison Rich	Pasadena
Ball, Wayne Kraemer.....	Los Angeles
Batz, John Baptiste	Bairdstown
Beasley, Edgar Franklin.....	South Pasadena

Bent, Avery Ballard.....	South Pasadena
Bercovitz, Zacharias	Los Angeles
Bookenoogen, Earl Vance.....	South Pasadena
Brandstetner, Carl F.	Los Angeles
Bryhan, Leone Grace.....	Lancaster, Wis.
Byram, Wilfred Carroll.....	Santa Ana
Campbell, Edwin Marcus.....	Long Beach
Carter, Anna Breckinridge.....	Riverside
Chester, Winfred Leonard	Monrovia
Christensen, Earnest Stephen.....	Pasadena
Coffeen, John Michael.....	Pasadena
Crawford, Harriet May.....	Fresno
Cunningham, Agnes Blanche.....	Denver, Colo.
Davidson, Park	Pasadena
Deems, Ralph Francis.....	Long Beach
Dorris, Robert Stayton.....	Phoenix, Ariz.
Drobish, Harry Everett.....	Riverside
Foote, Marjorie	Los Angeles
Fowler, William Warde.....	South Pasadena
Furlong, Marguerite	Redondo
Gailey, Jenne Gregg.....	Santa Paula
Goulding, Florence Adelia.....	Hollywood
Gutzler, Eleanor Louise.....	Los Angeles
Hardy, Sophie Edwina	Santa Ana
Harkness, Laura E.	Glendale
Herring, Harry Lehman.....	Long Beach
Hibbard, William Edward.....	Huntington Beach
Hill, Amy Ruth.....	Pasadena
Hill, Harry James.....	Los Angeles
Hollinger, Gemma Virginia.....	Altadena
Hoyt, Hubbard Spencer.....	Pacific Grove
Hoyt, Mary Celeste.....	Pacific Grove
Huddleson, Hugh Archible.....	Lemoore
Hudson, Mary Alice.....	Fowler
Irving, Louis John.....	Los Angeles
Jackson, Lucille Margaret	Los Angeles
Johnson, Rachel Roberts.....	Los Angeles
Jones, William Walter.....	San Bernardino

Kent, Evelyn Mae.....	Glendale
Kinney, Ernestine Adele.....	Los Angeles
Knowlton, Gladys Julia.....	Pasadena
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Larter, Florence Hazel.....	Huntington Beach
Law, James Augustus.....	Merced
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Lehigh, Lawrence R.	Eagle Rock
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Lewis, Charles Lyman.....	Los Angeles
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McKellar, Daniel Henderson	Downey
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Mitchell, Albert Knell.....	Albert, N. Mex.
Mitchell, Edith Augusta	Albert, N. Mex.
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Pierce, Ruth	Glendale
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*Preston, Eva Loretta.....	Huntington Beach
Prichard, Paul	Los Angeles
Prichard, Samuel Van Orden.....	Los Angeles
Prince, Rudolph Atlee.....	Alhambra
Reehl, Helen Harris.....	South Pasadena

*Deceased.

Reider, Francis D.	Long Beach
Riddick, Arthur Joseph.....	Long Beach
Robertson, Muriel Louisa	Pasadena
Rogers, Ruth Miriam	Los Angeles
Russell, Elizabeth	Glendale
Sage, Charles Gurdon.....	Benson, Ariz.
Sanborne, Annie Ruth.....	Oakland
Schaer, Mildred E.	Alhambra
Schultz, Muriel Emily.....	Watertown, Wis.
Schoeneman, Virgil Gilbert.....	Long Beach
Sharpe, Margaret	Los Angeles
Shipkey, Arthur H.	Orange
Sias, Richard Dean.....	Corona
Simpson, Charles	Long Beach
Smiley, Kenneth Edwin	Santa Ana
Smith, Robert Carson.....	Santa Ana
Smith, Stewart Smiley.....	Santa Ana
Sprinkle, Melson Rudge.....	Glendale
Starner, Albert John.....	Bell
Sweatt, Lucius Allen.....	Redondo
Swope, William A.	San Bernardino
Temple, Blair	Los Angeles
Travis, Orma	Alhambra
Tullis, Olive Catherine.....	Santa Monica
Vaughan, Zora Belle.....	Turlock
Walker, Mary Lynn	Los Angeles
Wells, Clarence Amos.....	Pasadena
Wickman, Glenn H.	Los Angeles
Wieman, Wallace	Los Angeles
Wilde, Edith Ashmore.....	South Pasadena
Woods, Basil Kirkman.....	Los Angeles
Wride, Adelaide	South Pasadena
Yoakum, Ruby	Los Angeles
Yoakum, Ruth	Los Angeles
Young, John Park.....	Los Angeles

SPECIALS

Browning, Helen Gilberta.....	South Pasadena
Carmack, Roy Leonard.....	Dana, Ind.
Council, Clarence B.	South Pasadena
Fox, Willard	Camden, N. J.
Holden, Edward Chester.....	San Dimas
Hurlburt, Agnes	Los Angeles
Hurlburt, Paul Frederick Elisha.....	Los Angeles
Kelsey, Harry Edward.....	Richmond, Kan.
Lehr, May Henrietta.....	Redlands
Logan, Arthur Evan.....	Escondido
Shephard, Vera May	Los Angeles
Wadsworth, Helen Marguerite	Los Angeles
Wadsworth, Ruth	Los Angeles

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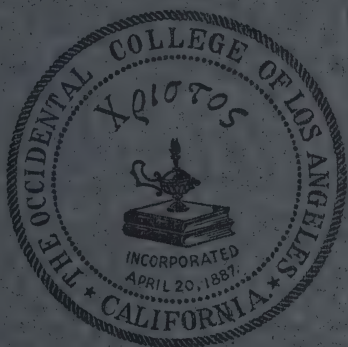
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Los Angeles

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CATALOGUE
of
OCCIDENTAL
COLLEGE

1914-1915

ANNOUNCEMENTS
FOR 1915-1916

LOS ANGELES
CALIFORNIA

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1915														1916														
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Calendar

1915

Sept. 20-21, Monday-Tuesday

Examinations for Admission and for
Removal of Conditions.

Registration of Students.

Sept. 22, Wednesday, 11 a.m.

First Semester Begins.

Nov. 25-26, Thursday-Friday

Thanksgiving Recess.

Dec. 17, Friday, 4 p.m.

Christmas Vacation Begins.

1916

Jan. 4, Tuesday, 8:30 a.m.

Christmas Vacation Ends.

Jan. 29-Feb. 5, Saturday-Saturday

Mid-Year Examinations.

Feb. 4, Friday, 4 p.m.

First Semester Ends.

Feb. 7, Monday

Registration of New Students.

Feb. 7, Monday, 11 a.m.

Second Semester Begins.

Mar. 24, Friday, 4 p.m.

Spring Vacation Begins.

April 4, Tuesday, 8:30 a.m.

Spring Vacation Ends.

June 3-10, Saturday-Saturday

Final Examinations.

June 4, Sunday, 4 p.m.

Vesper Service of the College Christian Associations.

June 11, Sunday, 4 p.m.

Baccalaureate Sermon.

June 13, Tuesday

Senior Class Day.

June 14, Wednesday, 10:30 a.m.

Twenty-fourth Annual Commencement.

Board of Trustees

"The management of the college shall be nonsectarian, and shall be vested in a self-perpetuating board of twenty evangelical Christian church members." (Article 6, of Charter.)

Term expiring January 31, 1916:

W. E. McVay,
David B. Gamble,
John Willis Baer, LL.D.,
Henry S. Carhart, Sc.D., LL.D.

Term expiring January 31, 1917:

Hon. Frank P. Flint,
Edward H. Groenendyke,
Rev. Robert Freeman, D.D.,
Frank May.

Term expiring January 31, 1918:

John G. Bullock,
Henry S. Boice,
J. A. Freeman,
Fred H. Schauer, Esq.

Term expiring January 31, 1919:

William H. Kelso,
W. L. Stewart,
Rev. John Balcom Shaw, D.D., LL.D.,
George E. Huntsberger.

Term expiring January 31, 1920:

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Rev. Wm. S. Young, D.D.,
E. P. Clapp, M.D.,
Rev. Hugh K. Walker, D.D., LL.D.

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1914-1915

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Boice, Baer, Carhart.

Finance—Trustees May, Groenendyke, Flint, Mc-
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Schauer.

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Gamble, Bullock.

Degrees—Trustees Baer, Shaw, Freeman, Young,
Carhart.

*Faculty and Instructors

1914-1915

JOHN WILLIS BAER, LL.D.,

President.

1906

THOMAS GREGORY BURT, Ph.D.,

Dean of the Faculty; Professor of Philosophy.

1909

WILLIAM S. STEVENSON, LL.D.,

Professor of Sociology.

1899

ERNEST E. ALLEN, M.A.,

Professor of Mathematics and Astronomy

1902

MARY CARRUTH CUNNINGHAM, M.A.,

Professor of English.

1904

WILLIAM D WARD, Ph.D.,

Rutan Professor of Classical Languages.

1906

CALVIN O. ESTERLY, Ph.D.,

Professor of Biology.

1907

GEORGE F. COOK, Ph.D.,

Professor of Education.

1907

*The year of first appointment is given under each name.

OCCIDENTAL COLLEGE

WILLIAM G. BELL, M.A.,
Professor of French and Spanish.
1909

ELBERT E. CHANDLER, Ph.D.,
Professor of Chemistry.
1909

LINNAEUS H. WESTCOTT,
Instructor in Technical Drawing.
1909

JOHN PRICE ODELL, M.A.
Professor of English.
1909

FRANK E. MOLL, M.A., S.T.B.,
Professor of German.
1909

HOWARD W. KELLOGG, M.A.,
Professor of Biblical Literature.
1910

ARTHUR G. PAUL, A.B.,
Associate Professor of History.
1911

JOSEPH A. PIPAL,
Physical Director.
1911

ROBERT GLASS CLELAND, Ph.D.,
Professor of History.
1912

MRS. JOSEPH A. PIPAL,
Physical Director for Women.
1912

CLYDE L. E. WOLFE, M.A.,
Acting Professor of Physics.
1912

JULIUS W. EGGLESTON, M.A.,
Professor of Geology and Botany.
1913

O. THEODORE JOHNSTON, C.P.A.,
Instructor in Accounting.
1913

HUBERT GIBSON SHEARIN, Ph.D.,
Professor of English.
1914

WILLIAM ORR McCONNELL, A.B.,
Instructor in Spanish.
1914

WILLIAM A. SHARP,
Instructor in Freehand Drawing.
1914

W. M. BURKE, Ph.D.,
Acting Professor of Economics.
1914

Officers of Administration

JOHN WILLIS BAER, LL.D.,
President.

THOMAS GREGORY BURT, Ph.D.,
Dean of the Faculty.

ARTHUR G. PAUL, A.B.,
Registrar.

MRS. JOSEPH A. PIPAL,
Chairman Women Students' Advisory Committee

GEORGE F. COOK, Ph.D.,
Librarian.

WILBUR G. SMART,
Business Manager.

LEONIDAS C. KIRKES, D.D.,
Field Secretary.

OLIVE E. HUTCHISON,
Secretary to the President.

JENNE GREGG GAILEY,
Assistant to the Librarian.

STANDING COMMITTEES OF THE FACULTY

1915-1916

President's Council—Dean Burt, Professor Allen, Professor Cunningham, Professor Ward, Professor Esterly, Professor Bell, Professor Cleland, Professor Shearin.

Admission, Classification and Schedule—Professor Paul, Dean Burt, Professor Allen, Professor Ward, Professor Chandler, Professor Cleland.

Athletics—Professor Esterly, Professor Chandler, Professor Bell, Director Pipal, Professor Shearin.

Catalogue and Curriculum—Professor Ward, Professor Allen, Professor Esterly, Professor Bell, Dean Burt.

Christian Work—Professor Kellogg, Professor Cunningham, Professor Burke, Mr. Westcott.

Grounds and Buildings—Professor Bell, Professor Odell, Professor Moll.

Laboratories—Professor Chandler, Professor Esterly, Professor Wolfe.

Library—Professor Cook, Dean Burt, Professor Kellogg, Professor Esterly, Professor Cunningham, Professor Shearin.

Rules and Discipline—Dean Burt, Professor Cleland, Professor Cook, Professor Ward, Professor Cunningham, Professor Paul, Professor Allen.

Social Life—Professor Cunningham, Dean Burt, Mrs. Pipal.

Events of the Year

1914

- Sept. 23 Opening of the College Year. Address, Rev. Daniel F. Fox, D.D., Pasadena, "Facing the Future."
- Oct. 1 Address, Rev. J. Whitcomb Brougher, D.D., Los Angeles, "Self-Made Men."
- Oct. 8 Address, Rev. Robert Freeman, D.D., Pasadena, "The Woman in the Background."
- Oct. 14 Addresses: Rev. J. W. Cochran, D.D., Philadelphia; Rev. David G. Wiley, D.D., New York, "A Definite Program."
- Oct. 16 Address, Rev. J. W. Cochran, D.D., Philadelphia, "Power."
- Oct. 19 Address, Mr. Gale Seaman, Coast Secretary Y. M. C. A., "The Modern Missionary Movement."
- Oct. 22 Lecture, Prof. H. G. Shearin, Ph.D., Occidental College, "American Folk Lore."
- Oct. 28-30 Three Addresses, Rev. Geo. G. Mahy, D.D., Philadelphia, "Vital Religion."
- Nov. 5 Lecture, Rev. Robert Freeman, D.D., Pasadena, "Peace."
- Nov. 12 Lecture, Rev. William Horace Day, D.D., Los Angeles, "The Philosophy of the Mailed Fist."
- Dec. 3 Address, Hon. Lorin A. Handley, President Board of Public Works, Los Angeles, "Present-Day Problems of American Democracy."
- Dec. 3 "As You Like It," presented by the Arden Club.
- Dec. 10 Address, Mrs. Alice Stebbins Wells, Member of the Police Force, Los Angeles, "Police Work as a Profession."

- Dec. 11 Address, "Chimmie" McFadden, New York, "A Raw Recruit."

1915

- Jan. 7 Concert, Tuskegee Institute Singers, Tuskegee, Ala.
- Jan. 14 Concert, Edison Phonograph, Southern California Music Company.
- Jan. 21 Lecture, Rev. E. A. Healy, D.D., Dean of the College of Theology, University of Southern California, Los Angeles, "Learning to Think."
- Jan. 22 Occidental-Whittier Debate, at Whittier College.
- Jan. 25-29 Five Lectures on "America's Higher Education," by Prof. Andrew F. West, Ph.D., LL.D., Hon. D. Litt., Dean of the Graduate School, Princeton University: "College Preparation," "College Studies," "College Life," "Graduate Studies," "What Liberal Education Means."
- Jan. 27 Address, Chancellor David Starr Jordan, Ph.D., LL.D., Leland Stanford Jr. University, "The Belgian Relief."
- Feb. 8 Opening of the Second Semester. Address, Hon. Charles W. Fairbanks, LL.D., Ex Vice-President of the United States, "The Rush-Bagot Treaty."
- Feb. 11 Day of Prayer for Colleges. Address, Rev. J. A. Francis, D.D., Los Angeles, "The Lord's Prayer."
- Feb. 12 Address, Rev. Thomas Moody, D.D., Belgian Congo, "Africa."
- Feb. 12 Home Concert of the Occidental College Glee Club.
- Feb. 19 Address, Rev. Guy W. Wadsworth, D.D., Los Angeles, "The Prohibition Tide."
- Feb. 25 Address, President W. O. Carrier, D.D., Carol College, "Expert Living."
- Feb. 27 Triangle Debate, Occidental-Pomona-U. S. C.

- Mar. 3 Address, Rev. J. E. Brown, D.D., Evangelist, "Character."
- Mar. 4 Address, Rev. J. C. Pinkerton, D.D., Los Angeles, "Harmony of Science and Revelation."
- Mar. 9 Address, Miss Zona Gale, "The New Constructive Idealism."
- Mar. 10 Address, Mr. August Schvan, Representative of the Carnegie Endowment for International Peace, "A New Code of International Law."
- Mar. 11 Address, Rev. A. J. McCartney, D.D., Chicago, "The Golden Side of the Shield."
- Mar. 18 Address, Ex-President E. D. Warfield, LL.D., Lafayette College, "Comradeship."
- Mar. 25 Address, Rev. Hugh K. Walker, D.D., Long Beach, "A Twentieth Century Trinity of First-Class Follies."
- Mar. 25 Intercollegiate Oratorical Contest, held at Occidental.
- April 8 Address, President John Willis Baer, LL.D., Occidental College, "Occidental, a College with a Soul."
- April 15 Address, Rev. D. M. Gandier, President California Anti-Saloon League, "What Next?"
- April 22 Address, President J. A. B. Scherer, Ph.D., LL.D., Throop College of Technology, "The Moral Equivalent of War."
- April 23 Concert, Occidental College Orchestra.
- April 29 Address, Mr. Hobart Bosworth, Manager Universal Film Co., "The Motion Picture Industry."
- April 29 Women's Debate, Occidental-U. S. C., Occidental Chapel.
- May 6 Junior Class Play.
- May 7 Address, Mr. John R. Mott, LL.D., President of the World's Student Federation, "Life Problems."
- May 14 Home Concert, Occidental Women's Glee Club.

Occidental College

History

IN the winter of 1885-6 Rev. W. S. Young, D.D., called together the five Presbyterian pastors of Los Angeles, with a number of laymen, to determine what steps could be taken toward founding a Presbyterian institution of higher learning. This temporary organization was soon superseded by the "Presbyterian Ministerial Union," at whose request Rev. Samuel H. Weller, D.D., undertook to outline a plan by which their ambition might be realized. As a result, "The Occidental University of Los Angeles" was incorporated April 20, 1887, and Dr. Weller was chosen as its first president. The site selected was east of Boyle Heights. Here the first buildings were erected, and the formal opening took place September 11, 1888, McPherron Academy, which had already been in operation one year, being taken over as a part of the new institution. Along with other changes in the charter made July 8, 1891, came the adoption of a less pretentious name—"The Occidental College of Los Angeles."

The destruction of the main building by fire occurred January 13, 1896. However, the work of the college was carried on until commencement in the Boyle Heights Presbyterian church, and then

for two years in rented rooms on Hill street between Sixth and Seventh. A new site of several acres was now secured in Highland Park, where the first building was occupied in the fall of '98. Then followed a period of rapid growth, as evidenced by statistics of students and faculty on the one hand and of material resources on the other.

But the necessity for a second change of location soon became evident, owing to certain features of the old campus which rendered it unsuited to the needs of a growing college. After a strenuous campaign for the necessary funds, this was accomplished, removal to the present site finally taking place in the summer of 1914. The academy, in the meantime, had been discontinued.

The present charter was adopted April 7, 1910. In articles VI and III the rule governing the election of trustees and the principles by which they are to be guided in administering the affairs of the college are thus set forth:

"The management of the college shall be non-sectarian, and shall be vested in a self-perpetuating board of twenty evangelical Christian church members."

"The teaching and management of the college shall always be in accord with that of the evangelical Christian churches concerning the fatherhood and sovereignty of God, the deity and atonement of Jesus Christ, the person and work of the Holy Spirit, and the Bible as an authoritative revelation from God, and other fundamental doctrines of Christianity."

Following is the complete succession of presidents from the first:

Rev. Samuel H. Weller, D.D., 1887-1891.

J. M. McPherron, A.M., 1891-1894.

Rev. Elbert N. Condit, A.M., 1894-1896.

J. W. Parkhill, A.M., 1896-1897.

Rev. Guy W. Wadsworth, D.D., 1897-1905.

Rev. W. S. Young, D.D. (Acting), 1905-1906.

John Willis Baer, LL.D., 1906.

Purpose

Occidental is a Christian college of the liberal arts and natural sciences, with certain definite aims. One of these is to afford adequate preparation for professional and post-graduate study. Another is to provide those seeking a business career with training of a broadly cultural character, yet distinctly adapted to their life purpose. Incidentally the curriculum is so arranged that in several branches of engineering the first two years may be taken at Occidental without loss of time or thoroughness. Stated comprehensively, the purpose of the college is to fit young men and women for life in its largest sense.

Though bound by no denominational creed, Occidental stands firmly on the great truths of evangelical Christianity. Barring all sectarianism, the word of God is held to be the book of divine authority. Through faith in its teachings the founders of the college sought to mold young men and young women to lives of the highest usefulness, and in that faith their successors remain.

Location and Grounds

Boarding an Eagle Rock City car on Spring street, or a York Boulevard car on Main, the stranger soon finds himself in a picturesque valley with every suggestion of the city left behind. Here, just outside the northern limits of Los Angeles, is the college campus, extending over ninety acres and affording a landscape of rare beauty. In shape it resembles a roughly drawn semicircle, a low range of foothills marking the diameter, while the curved portion takes in a considerable section of the valley. Above the hills appear the Sierra Madre mountains, including Mount Lowe and Mount Wilson with its famous solar observatory. In two other directions the sky line is broken by the Verdugo and Santa Monica ranges. A lower area toward the southwest gives the sea breeze direct access, thus purifying and tempering the atmosphere.

One of the most conspicuous charms of the campus is its diversity. Its highest point forms a lookout, from which may be obtained a wide view of the surrounding region with now and then a glimpse of the sea. On a convenient slope, where it is hoped such a structure may some day be erected, appears the general contour of an open-air theater, hollowed out with striking precision by the hand of nature. Below this is a native grove of wide-spreading live oaks. In addition, trees have been planted along all the drives, and elsewhere as required for shade or ornamentation.

The athletic field, when completed, is to be a close copy of the famous Franklin field on the

grounds of the University of Pennsylvania. Life in the open is nowhere more alluring, and nowhere less subject to interruption at all seasons of the year, than in this corner of the southland. It is the wish of the trustees to provide whatever facilities may be necessary for taking advantage of these conditions.

Buildings

At the foot of the hills which form the eastern boundary of the campus stand two buildings, facing west, companions in appearance and outward design, one known as the Johnson Hall of Letters and the other as the Fowler Hall of Science. The former is the gift of Mr. and Mrs. O. T. Johnson of Los Angeles, credited with generous gifts to the college on various other occasions. The latter is a memorial to Mr. Eldridge M. Fowler of Pasadena, erected by his daughter and grand-daughter. Each of these buildings contains three stories, or four at the back, with ground dimensions 155 by 80 feet. The exterior, generally speaking, is after the style of the Italian Renaissance. The structural frame is of reinforced concrete, the outside walls being in white stucco with stone trimmings. Both structures are strictly fireproof. The space of 100 feet which separates them is occupied by an ornamental terrace known as the Upper Quadrangle. The approach to this is by broad flights of concrete steps, while from the quadrangle itself similar steps lead to the second floor of either building.

On the first floor of Johnson Hall are to be found the offices of President, Dean, Registrar and Busi-

ness Manager, besides the college postoffice, the students' book store, and the office of **The Occidental**. The Y. W. C. A. hall and the rest rooms of the young women are also on this floor. In the south end of the building is an Old English chapel, known as Alumni Hall. Its main entrance is from the Quadrangle, with side entrances from the corridor on the second floor. The remainder of Johnson Hall is devoted to class rooms and offices for various departments of instruction.

Fowler Hall provides a home for the departments of natural science at once handsome and commodious. The usual facilities demanded by modern methods of instruction are incorporated. For the present, a students' cafe is located on the first floor, occupying three rooms next to the Quadrangle. Part of the remaining space on the same floor is taken up with Y. M. C. A. quarters and locker rooms for the young men, while at the south end a room 75 feet long and proportionate in width serves as a temporary home for the library.

James Swan Hall is a dormitory for men, erected by Mrs. Frances B. Swan, of Pasadena, as a tribute to her husband, Mr. James Swan. Strictly fire-proof and constructed on modern lines, it provides a comfortable home for young men. On the ground floor is a large club room for lounging and social recreation, with open fireplace, pictures, settees, and other home-like appointments. Special features of Swan Hall are the sleeping balconies on the top floor and the shower baths conveniently distributed through the building. More specific in-

formation concerning dormitory accommodations may be found on page 95.

Steam heat for all the buildings is supplied from a central heating plant.

Library

The library contains more than eight thousand volumes, including many valuable reference works. During the present year books of special service in science, literature, and history have been purchased with funds donated by the alumni. Several of the department libraries are especially creditable, being well supplied with the latest and best literature in their various lines. Current magazines are kept on file, as well as bound volumes, and are of the greatest assistance to students in all classes.

Laboratories

The laboratories are ample and well arranged. Modern apparatus is provided for demonstration and experiment in the work of the different departments.

Requirements for Admission

Admission to the Freshman Class

N. B.—The number of Freshmen to be admitted in September, 1915, is limited to one hundred and fifty.

An **Entrance Unit** represents a subject pursued through one school year in high school or academy, with not less than one hundred and sixty recitations of forty-five minutes each, two periods in the laboratory counting as one recitation.

Freshman standing is granted to graduates of approved preparatory schools presenting fifteen entrance units, all of which are recommended; provided, however, that two out of the fifteen are in English and not more than four are in the vocational subjects numbered 18-21. A subject personally recommended by the Principal will be counted as of recommending grade. Recommendation in less than the fifteen entrance units required may be supplemented by passing satisfactory examinations at the College or under one of the recognized examination boards. In general, candidates should not seek to be admitted until they have completed the requirements in full.

Provisional standing may be granted to graduates of approved preparatory schools presenting fifteen entrance units of **high average** grade, not all of which are recommended; provided, however, that two out of the fifteen are in English and not more than four are in the vocational subjects num-

bered 18-21—each case to be decided on its merits by the Committee on Admission and Classification. One thus admitted will not be finally enrolled until the second semester, and then only provided his scholarship record for the first semester has been altogether satisfactory.

In lieu of the above requirements, any candidate may qualify for Freshman standing by passing satisfactory examinations in all the subjects necessary for entrance, either at the College or under one of the recognized entrance examination boards.

Applications for admission on less than fifteen units will not be considered.

A statement that the candidate is morally and intellectually fit to be admitted into the College must accompany each application, with the signature of some responsible person attached. For graduates of high schools and academies this statement is included in the application blank furnished by the College, which must first be filled out with the candidate's record and other desired information, and then be signed by the Principal.

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Advanced Standing

Students from other institutions of recognized collegiate rank will be admitted to such standing as seems just and equitable.

Graduates of the State normal schools who are also graduates of accredited high schools and who are especially recommended by the normal school faculties, may enter Occidental with a credit of thirty-two units, and thus be enabled to complete

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their college course in three years. Those who have graduated in the Academic Professional Course of the State normal schools will be allowed forty-eight units when they can in one semester's work qualify for admission to the Junior year.

Special Students

Those whose preparation does not admit them to the status of Freshmen are sometimes admitted as special students, but only in case of age and maturity. Special students are subject to the same regulations as the others. They may become candidates for a degree at any time by meeting the usual entrance requirements. On withdrawing from the institution they will be granted certificates showing the work completed.

Admission Subjects

In subjects offered for college entrance, the University of California sets the standard to which all accredited high schools of this state must conform. For this reason, and because the state's requirements are familiar to every one in California concerned with secondary education, Occidental makes use of the University's list. Detailed descriptions are omitted, as they are in the hands of all the principals. Outside of California, the accrediting lists of the different state universities will be consulted, both as to subjects and schools, and applications for admission should, if possible, be made on university blanks.

*1.	Elementary English	2 units
	Required for entrance.	
2.	Plane Geometry	1 unit
3.	Elementary Algebra	1 unit
4a.	Algebraic Theory	$\frac{1}{2}$ or 1 unit
4b.	Solid Geometry	$\frac{1}{2}$ unit
5.	History and Government of the U. S.	1 unit
6a.	Elementary Latin; Caesar, Nepos..	1 unit
6b.	Latin Composition, Elementary....	1 unit
6ab ¹ .	Elementary Latin	1 unit
	One year in subjects 6a and 6b.	
7a.	Advanced Latin; Cicero, Sallust...	$\frac{2}{3}$ unit
7b.	Advanced Latin; Vergil, Ovid.....	$\frac{2}{3}$ unit
7c ¹ .	Latin Composition, Advanced.....	$\frac{1}{3}$ unit
	Accompanying subject 7a.	
7c ² .	Latin Composition, Advanced.....	$\frac{1}{3}$ unit
	Accompanying subject 7b.	
8a.	Elementary Greek	1 unit
8b.	Anabasis I-IV, or equivalent.....	1 unit
9a.	Attic Prose, Advanced	$\frac{1}{2}$ unit
9b.	Homer's Iliad I-III	$\frac{1}{2}$ unit
10.	Ancient History and Geography...	1 unit
11.	Physics	1 unit
12a ¹ .	Synthetic Projective Geometry....	$\frac{1}{2}$ unit
12a ² .	Plane Trigonometry	$\frac{1}{2}$ unit
12a ³ .	Plane Analytic Geometry.....	$\frac{1}{2}$ unit
12b.	Chemistry	1 unit
12c.	Botany	1 unit
12d.	Zoology	1 unit
12e.	Physical Geography	1 unit

*Although applicants are admitted to Freshman English who are recommended by accredited schools in a minimum of two years of English, it is strongly advised that the subject be pursued for three years, or preferably four. Students whose work after admission proves notably defective in spelling, punctuation, idiom, or paragraphing will be required to remove the defect under conditions named elsewhere.

- 12f. Physiology 1 unit
- 12g. General Science 1 unit
- 13a. Mediaeval and Modern History.... 1 unit
- 13b. English History 1 unit
- 14a. Advanced English 1 unit
- 14b. Advanced English 1 unit
- 15a¹. Elementary French. One-year.... 1 unit
- 15a². Elementary French. Two-years ... 2 units
- 15a³. Intermediate French. Third-year... 1 unit
- 15a⁴. Advanced French. Fourth year.... 1 unit
- 15b¹. Elementary German. One-year.... 1 unit
- 15b². Elementary German. Two-years... 2 units
- 15b³. Intermediate German. Third year.. 1 unit
- 15b⁴. Advanced German. Fourth year.... 1 unit
- 15c¹. Elementary Spanish. One-year.... 1 unit
- 15c². Elementary Spanish. Two-years.... 2 units
- 15c³. Intermediate Spanish. Third year.. 1 unit
- 15c⁴. Advanced Spanish. Fourth year.... 1 unit
16. Freehand Drawing 1 unit
Two years, four hours a week.
17. Geometrical Drawing 1 unit
- 18a. Mechanical Arts $\frac{1}{2}$ to 3 units
Woodwork, forgework, molding, machine shop practice, plumbing, electrical work, etc. Not more than 1 unit or less than $\frac{1}{2}$ for any one. Each unit represents a year's work, 10 periods a week.
- 18b. Applied Art $\frac{1}{2}$ to 1 unit
Clay modeling, wood carving, art metal work, etc., with power of designing the article to be produced. Each unit represents a year's work, 10 periods a week.
- 18c. Clothing 1 to 2 units
Sewing and dressmaking, with design and the study of materials, combined with problems of purchasing. Each unit represents a year's work, 10 periods a week.

- 18d. Food Preparation1 to 2 units
Cooking, with emphasis on the fundamental principles of physics and chemistry which underlie the work. Elementary dietetics and nutrition, with problems of purchasing. Each unit represents a year's work, 10 periods a week.
- 18e. Shelter $\frac{1}{2}$ unit
Housing, separate and collective, with elementary problems of equipment, management, and purchasing. Each unit represents a year's work, 10 periods a week.
- 19a. Agriculture 1 unit
A course based on plant study. It should include instruction in the elementary and fundamental principles of biology, including physiology and bacteriology, chemistry, physics, and physical geography, these principles to be taken up in connection with the study of the growth and development of the plant, and of its environment.
- 19b. Dairying $\frac{1}{2}$ unit
The composition and testing of milk; separation of cream from milk, butter making, cheese making, sanitary production and handling. At least half the exercises should be laboratory or field work.
- 19c. Live Stock. Year course..... 1 unit
Types and breeds of live stock. Stock judging. Care and management.
- 19c¹. Live Stock. Short course in 19c.... $\frac{1}{2}$ unit
- 19d. Poultry $\frac{1}{2}$ unit
Types and breeds. Care and management.
- 19e. Horticulture 1 unit
The work should include study of the fruits and vegetables of California, and especially of the pupil's home region as to varieties, methods of growth, cultivation, improvement, and marketing. To be preceded by 12c, or by a year in biology with either 19a or 12g.
- 19e¹. Horticulture. Short Course in 19e.. $\frac{1}{2}$ unit
- 19f. Farm Mechanics, Farm Architecture
and Farm Management 1 unit

- 19f'. Farm Mechanics, Farm Architecture,
and Farm Management. Short
course in 19f $\frac{1}{2}$ unit
- 20a. Economic Geography $\frac{1}{2}$ unit
- 20b. Commercial and Industrial History. 1 unit
- 20c. Bookkeeping 1 unit
Double entry. Ten periods a week, one year.
- 20d. Stenography and Typewriting... 1 or 2 units
Not more than one-fourth to be typewriting.
- 21a. Sight-singing and Dictation..... 1 unit
Ability to read, without hesitation, at sight, in
good rhythm, a given simple melody in any
commonly used key. Ability to write in musi-
cal notation (G and F clefs), marking proper
meter (2, 3 or 4), any simple melody when
played or sung at dictation.
- 21b. Elements of Composition; Harmony
and Structure 1 unit
Should be preceded by 21a.
- 21c. Instrumental or Vocal Technique... 1 unit
Pianoforte, Violin, or Voice. Exceptional tech-
nique upon any instrument in the orchestra
may receive similar credit. Reading at sight.
- 21d. History of Music 1 unit

Requirements for Graduation

No student is permitted to graduate who has not spent at least one year in resident study at Occidental College.

All conditions must have been removed at least six weeks previous to the day of graduation.

The unit employed in reckoning college credit is one exercise per week in one subject continued through a semester. One hundred and twenty-four units in addition to Physical Training* are required for graduation, sixty-four to be completed normally in the Freshman and Sophomore years and sixty in the Junior and Senior. In certain cases a subject counted for admission may afford exemption from some specific college requirement, but without lessening the total number of units necessary for a degree.

The following subjects are prescribed in all courses leading to a degree:

†Biblical Literature	8 units
Composition and Rhetoric	6 units
English Literature	6 units
§French, German, or Spanish.....	14 units

*Physical Training will not be required of Freshmen and Sophomores in 1915-16, owing to unsettled conditions on the new campus.

†A two-hour course either the first or the second semester of each year.

§Only six units if the language chosen has been pursued two years in the high school. For those expecting to go beyond the master's degree in post-graduate work, both French and German are indispensable.

Natural Science	6 units
History	6 units
Psychology	3 units
Logic	3 units

In addition, every student is expected to choose two closely allied departments in which to carry his investigations beyond the elementary stage. These two departments may be History and Economics, History and Sociology, History and Philosophy, Mathematics and Physics, Physics and Chemistry, Chemistry and Biology, or any two of the following: English, French, German, Spanish, Greek, Latin, History. From the two departments thus chosen, Upper Division courses amounting altogether to eighteen units must be completed before graduation. The entire eighteen may be taken in one of the two departments, provided the prerequisites for Upper Division courses in the other department be fully met.

Aside from these restrictions, the student is allowed full freedom in the choice of courses, subject always to the prerequisites named under the several departments of instruction.

Degrees

Any student completing the above requirements with an average grade of 3.5, and otherwise maintaining an honorable record to the end of the course, will be granted the degree of A.B. or B.S., depending on the departments in which he has specialized.

Departments of Instruction

A new system of numbering courses was introduced in the catalogue of 1914. Under this system any number from 1 to 20 inclusive indicates a Lower Division course. Any number higher than 20 indicates an Upper Division course. Ordinarily, first semester courses have odd numbers, and second semester courses have even numbers, but not invariably. Two numbers with a hyphen between, as 1-2, indicate a course which continues through the year. L added to a number means a laboratory course.

Where a course was numbered differently under the old system, the old number is added in parenthesis just under the new. This is done for convenience in consulting the records and in transferring credits.

Biblical Literature

Professor Kellogg

1. Pentateuch.

The five books of Moses are studied with a view to the mastery of the facts recorded: the creation of the world and of man, the entrance of sin, the beginnings of redemption, of national life, of the covenant people. The Mosaic Law is studied in relation to the "better covenant" to follow.

2 hours, first semester.

2. **Historical Books of the Old Testament.**

This course is a continuation of Course 1, and carries the student through the period of the Conquest, the Commonwealth, and into the time of the Kingdom.

2 hours, second semester.

3. **The Kingdoms of Judah and Israel.**

The books of Samuel, Kings, and Chronicles are studied as one continuous history on the basis of a harmony of these six books.

2 hours, first semester.

4. **Pauline Epistles.**

- (3) Advanced work is undertaken in synthetic study of the Epistles, chiefly Romans. Analysis of material and exposition of fundamental Christian truth as held historically by the church is undertaken from the text of the Epistles.

2 hours, second semester.

5. **Jeremiah and the Minor Prophets.**

- (4) These books are studied with particular reference to the political situation of the times which they portray. The immediate message and the messianic message are discriminated. The prophets were the statesmen of the Theocracy.

2 hours, second semester.

7. **The Book of Isaiah.**

- (5) This massive prophecy is studied in its historical relationships and particularly in its

messianic messages. Omitted in 1915-1916.
2 hours, first semester.

8. **Life of Christ.**

- (7) This study of the Gospels is designed to cover not merely the mechanical outline of the life of our Lord, but deeper teachings of His ministry and message, His death and resurrection.

2 hours, first semester.

9. **The Acts and the Earlier Epistles.**

- (8) The transition from the period covered by the Gospels to the period when by means of Epistles the churches are instructed in mature Christian truth is covered by the Acts. This book and certain of the earlier Epistles are studied with a view to the mastery of facts which are formative in the beginning of church history.

2 hours, second semester.

10. **The Poetry of the Bible.**

- (11) This course involves the study of songs commemorative of deliverance from enemies, the psalms of historical summary, the messianic psalms, and songs of religious experience. Omitted in 1915 and 1916.

2 hours, one semester.

11. **The Post-Captivity Period.**

- (14) The return from Babylon and the period between the Testaments is covered by a study of the post-captivity books and other historical sources.

2 hours, second semester.

12. The Bible and Historic Faith.

This course assembles the testimony of the Scriptures on the fundamental teachings of the church in all ages. The doctrines of God, of man, of sin and redemption are studied as they lie imbedded in the Bible records.

2 hours, first semester.

13. The New Testament in Greek.

Selections from Gospels and Epistles.

Prerequisite, one year of Greek.

2 hours, first semester.

14. Hebrews and the Shorter Epistles.

- (13) The ultimate exclusion of Christian Jews from the temple worship calls forth the book of Hebrews, a book of "better things" than those connected with the temple worship. The fulfillings of the ritual are traced in this course, and certain of the later epistles are studied. Omitted in 1915-1916.

2 hours, second semester.

Biology

Professor Esterly
Professor Eggleston

LOWER DIVISION COURSES

1-2. Principles of Zoology.

- (1) The scope of this course is indicated by the name. Systematic zoology, morphology, and

physiology are considered in the first semester, and topics of general interest as well as facts and theories connected with various other subjects in the science are taken up in the second semester. Instruction is by means of lectures and written quizzes, papers upon assigned topics, and outside reading.

3 hours, throughout the year (6 units).

Professor Esterly.

1L. General Zoology.

- (2) A laboratory course, in which several invertebrate types are studied, and the shark among vertebrates. Course 1L must be taken by all who expect to pursue advanced courses in zoology.

Prerequisite, Course 1-2 or its equivalent completed or in progress, and Sophomore standing.

2 laboratory periods, first semester (2 units).

Professor Esterly.

2L. General Zoology.

- (3) A laboratory course, intended to give some insight into vertebrate embryology, histology and anatomy. The development of the frog, toad, or salamander is followed, and the salamander and pigeon, one or both, are used in dissection.

Prerequisite, Course 1L.

2 laboratory periods, second semester (2 units.)

Professor Esterly.

6L. Field Zoology.

- (7) Principally a laboratory or field course, the aim of which is to enable students to become acquainted with the higher vertebrates, especially the birds inhabiting this region. Not given to less than five students, nor more than ten.

Prerequisite, at least Biology 1-2.

1 afternoon in the field weekly, second semester (1 unit).

Professor Esterly.

8. Human Physiology.

Lectures, quizzes, and experimental demonstration by means of modern apparatus, preparations and models.

Prerequisite, Course 1-2.

3 hours, second semester (3 units).

Professor Esterly.

11. Cryptogamic Botany

- (Bot. 1.) The study of algae, fungi, mosses, and ferns.

2 hours of lectures and 2 two-hour laboratory periods, first semester (4 units).

Professor Eggleston.

12. Phanerogamic Botany.

- (Bot. 2.) The study of the structures, functions, and families of flowering plants.

2 hours of lectures and 2 two-hour laboratory periods, second semester (4 units).

Professor Eggleston.

13L-14L. Economic Botany.

(Bot. 3.) Botany as related to agriculture, horticulture, and forestry. The approval of the instructor is necessary for admission to this course.

Prerequisite, Courses 11 and 12.

1 three-hour conference or laboratory period, throughout the year (2 units.)

Professor Eggleston.

UPPER DIVISION COURSES**21. Anatomy of Vertebrates.**

(4) Lectures and laboratory. The course aims to cover the higher vertebrate groups in a comprehensive way. The cat is the principal subject of dissection.

Prerequisite, Courses 1-2, 1L, and 2L.

2 laboratory periods and 2 hours of lectures or recitations, first semester (4 units).

Professor Esterly.

22. Cytology and Histology.

(5) Lectures and laboratory. The animal cell is studied in its various phases of activity, and the microscopical anatomy of tissues and organs of vertebrates is taken up. There is constant practice in the use of reagents and stains, and in the preparation of mounts and series of sections for the microscope. Not given in the same year with Course 24. Omitted in 1915-1916.

Prerequisite, Courses 1-2 and 21, or equivalents.

3 laboratory periods and 2 hours of lectures or recitations, second semester (5 units; but 1 additional unit will be given if a satisfactory paper is written, on an assigned topic, involving some original work on the part of the student.)

Professor Esterly.

24. Embryology.

(6) Lectures and laboratory. The development of vertebrates is studied by means of a textbook and outside reading. There is constant practice in the laboratory in embryological methods, the objects of study being the chick and the pig. Not given in the same year with Course 22. Given in 1915-1916.

Prerequisite, Courses 1-2, 1L-2L, and 21, or equivalents.

3 laboratory periods and 2 hours of lectures or recitations per week, second semester (5 units; but 1 additional unit will be given if a satisfactory paper is written, on an assigned topic, involving some original work on the part of the student).

Professor Esterly.

25L. Advanced Zoology Laboratory.

The student will select, after consultation, some topic for special study, which he is to pursue independent of formal instruction. The course is intended as an introduction to more pretentious research. The number of hours must be arranged in advance.

It is expected that not less than one laboratory period per week will be devoted to the work.

Prerequisite, Biology 21 and either 22 or 24.

First semester.

Professor Esterly.

Chemistry

Professor Chandler

LOWER DIVISION COURSES

1-2. General Chemistry.

(1 I) For those without entrance Chemistry. Meets twice a week with Chemistry 3-4 for lectures, and once a week separately for recitation and special instruction. Smith: "Chemistry for Colleges."

3 hours, throughout the year (6 units).

1L-2L. General Chemistry Laboratory.

(2) Laboratory course to accompany Chemistry 1-2. Smith and Hale: "Laboratory Manual of General Chemistry."

1 laboratory period, throughout the year (2 units).

3-4. General Chemistry.

(1 II) For those with entrance Chemistry. Meets twice a week with Chemistry 1-2 for lectures, and once a week separately for lectures and recitations in the theory and practice of

Qualitative Analysis. Smith: "Chemistry for Colleges." Stieglitz: "Qualitative Chemical Analysis," Part I.

Prerequisite, Admission subject 12b.

3 hours, throughout the year (6 units).

3L-4L. Qualitative Analysis.

- (3) Laboratory course to accompany Chemistry 3-4. Stieglitz: "Qualitative Chemical Analysis," Part II.

2 laboratory periods, throughout the year
(4 units).

5L-6L. Quantitative Analysis.

- (4, 5) Practice in the general methods of gravimetric, volumetric and electrolytic determinations, with occasional lectures upon the principles involved. Talbot: "Quantitative Chemical Analysis."

Prerequisite, Course 4L.

3 laboratory periods, throughout the year
(6 units).

UPPER DIVISION COURSES

21-22. Organic Chemistry.

- (6) Lectures and recitations on the chemistry of the aliphatic and aromatic compounds. Perkin and Kipping: "Organic Chemistry."

Prerequisite, Course 6L, but may be taken as a Lower Division course with Chemistry 1-2 as the only prerequisite.

2 hours, throughout the year (4 units).

21L-22L. Organic Chemistry Laboratory.

- (7) Preparation and reactions of typical organic compounds. Jones: "Laboratory Outline of Organic Chemistry."

Prerequisite, Course 21-22 completed or in progress.

1 laboratory period, throughout the year (2 units).

23-24. Industrial Chemistry.

- (9) Lectures and recitations. To alternate with Course 25-26. Rogers and Aubert: "Industrial Chemistry." Omitted in 1915-1916.

Prerequisite, Course 6L, but may be taken as a Lower Division course with Chemistry 1-2 as the only prerequisite.

2 hours, throughout the year (4 units).

25-26. Physical Chemistry.

- (8) Lectures and recitations in the field of Physical and Electro-Chemistry. To alternate with Course 23-24. Bigelow: "Theoretical and Physical Chemistry." Le Blanc: "Electro-Chemistry." Given in 1915-1916.

Prerequisite, Course 6L.

2 hours, throughout the year (4 units).

27L. Advanced Chemistry Laboratory.

- (10) Special methods of Qualitative Analysis, including water, gas, oil, feed, food, and electrolytic analysis; assaying; organic and inorganic preparations; physical chemistry measurements. The student may choose

from these subjects, and so fit himself for technical or research work.

Prerequisite, Course 6L.

1 or more laboratory periods, one semester.

Drawing

Mr. Westcott

Mr. Sharp

The courses offered will enable students preparing for engineering or other professions to obtain the necessary foundation work in both technical and freehand drawing before taking up their specialized studies. The value of drawing for the purpose of culture is also strongly emphasized, the freehand work and elementary technical courses being particularly recommended. For students preparing for high school teaching, supplementary work with additional credit can be arranged.

FREEHAND DRAWING

Mr. Sharp

1-2. Elementary Freehand Drawing.

Drawing in pencil, pen and ink, and charcoal, from models and still life, outdoor sketching, the principles of light and shade, and perspective.

Open to all.

3 hours, throughout the year (2 units).

3-4. Landscape and Architectural Sketching.

Sketching from nature, architectural subjects,

drawing from memory, composition. This course is recommended as a preparation for Course 7-8.

Prerequisite, Course 1-2.

3 hours, throughout the year (2 units).

5-6. **General Drawing and Design.**

In this course the option is given of selecting work of a broadly cultural character or of a more technical nature in the field of applied art and design. Details of the work must be arranged in advance with the instructor. As much latitude will be permitted as is consistent with thoroughness. Some suggested topics are: Figure and landscape sketching, advanced work in black and white and colored media, study of natural forms with application of same to design, conventional ornament, decorative and industrial design (stencil, fabrics, art craft, illumination, etc.).

Prerequisite, Course 1-2.

3 or 6 hours, throughout the year (2 or 4 units).

7-8 **Architectural Rendering.**

Pen, pencil, water color, and crayon as media. Perspective (lineal and aerial). Landscape and foreground composition.

Prerequisite, Course 1-2; Technical Drawing 13 completed or in progress.

3 or 6 hours, throughout the year (2 or 4 units).

9. **Lettering.**

Freehand, instrumental, and ornamental lettering, round writing, illuminating.

Open to all.

3 hours, either semester (1 unit).

TECHNICAL DRAWING

Mr. Westcott

1. **Instrumental Drawing.**

A. Linear drawing, lettering, geometrical problems and constructions, mathematical curves.

Open to all.

3 hours, either semester (1 unit).

B. Elementary principles of projection, working drawings, dimensions, blue-print reading, shop sketching. A condensed general course for students taking but one year of drawing and for those taking freehand courses.

Prerequisite, Course 1A.

3 hours, either semester (1 unit).

C. Line ruling, lettering, tabulating, curve plotting, charts. An individually arranged course for students of commerce or other subjects where linear drawing is required.

Open to all.

3 hours, either semester (1 unit).

3-4. **Orthographic Projection.**

(2) Problems in projection, intersection of solids,

development of surfaces. Application of the foregoing principles to working drawings, isometric projection, shop sketching. This course is suitable for those who desire a working knowledge of mechanical drawing but who may not find it desirable to take the more extended course in Descriptive Geometry.

Prerequisite, Course 1A.

3 hours, throughout the year (2 units).

5-6. **Descriptive Geometry.**

- (3) **A.** Basic principles, problems on point, line and plane, curved surfaces, sections, intersections.

B. Shades, shadows and perspective.

This subject is a requirement in all architectural and engineering courses. From one to three hours per week are devoted to recitation or lectures, the balance to work at the drawing board.

Prerequisite, Courses 1A and 1B or Course 3-4; Mathematics 2.

6 hours, throughout the year (6 units).

7-8. **Machine Drawing.**

- (4) Machine details, bolts and nuts, screw threads, machine movements, cam, lever and link, spur and bevel gears. Complete shop drawings of machines, assembly drawings, tracings, blue prints, titles.

Prerequisite, Course 3-4 or 5-6.

3 hours, throughout the year (2 units).

9-10. Architectural Drawing.

- (5) A course familiarizing the student with the technical terms used in architectural practice and building construction, the principles of plan drawing and detail. The work may be varied to suit the special needs of the student, the object being to provide a thorough foundation of elementary knowledge in the subject upon which to base advanced work. The class-room work is supplemented by lectures on drafting room practice, visits to the office of some architect and the inspection of buildings under construction.

Prerequisite, Course 3-4 or 5-6.

3 hours, throughout the year (2 units).

11-12. Statics—Graphic and Algebraic.

- (6) The analysis of statical problems by both graphic and algebraic methods. The problems advance from simple forms of composition and resolution of forces to the complex application of those principles in the determination of strains in frames such as bridge and roof trusses, girders, the cantilever, etc.

Prerequisite, Courses 1A and 1B, and Mathematics 1.

4 hours, throughout the year (4 units).

13. Shades, Shadows, Instrumental Perspective.
Theory and practice.

Prerequisite, Course 1B or 3-4.

4 hours, either semester (2 units).

Economics

Professor Burke

Mr. Johnston

Students who major in this department will be required to take History 1-2 and 3-4 as a minor. A thorough reading knowledge of French, German, or Spanish is also essential, and should be regarded as an integral part of the work.

LOWER DIVISION COURSES

1-2. Principles of Economics.

- (1) An introductory course dealing with modern economic theories and practical problems. The production and the consumption of wealth, the distribution of wealth among the agents of production, the principles and problems of exchange. This course is prerequisite to all Upper Division courses in Economics.

3 hours, throughout the year (6 units).

Professor Burke.

4. Economic Geography.

- (3) A study of the relation of environment to production and trade, including man's reaction upon his environment. Special attention will be paid to the elements of industrial greatness of the United States, Great Britain, and Germany.

3 hours, second semester.

Professor Burke.

5-6. Accounting.

- (5) Fundamental theory and practice of accounts. Theory and practice of auditing. Working papers and reports. Constructive accounting.

2 hours of lecture and recitation, 1 laboratory period, throughout the year (6 units.)

Mr. Johnston.

UPPER DIVISION COURSES

History 1-2 and Economics 1-2 are prerequisite to all Upper Division courses in this department.

21. Money and Banking.

- (10) The fundamental principles of monetary theory, the history and theory of banking, and the discussion of current problems and recent legislation.

3 hours, first semester (3 units).

Professor Burke.

23. Elements of Jurisprudence.

- (12) A study of the principles that underlie the "formal science of positive law," and of their historical development. Some attention will be paid to the rudiments of commercial law.

3 hours, first semester.

Professor Burke.

26. Public Finance.

- (14) A study of the theories and methods of taxation. Attention will be paid to the collection and disbursement of public funds by fed-

eral, state, and local authorities, and by European governments.

3 hours, first semester.

Professor Burke.

27. Corporation Finance.

- (15) The place of the corporation in modern industrial organization. Special attention will be paid to corporate organization and management. The evils of corporate organization. Public policy toward corporations. Recent legislation. Omitted in 1915-1916.

3 hours, first semester.

Professor Burke.

28. Modern Industrialism and Labor Problems.

A study of the rise of modern industrialism, with particular attention to the problems arising out of the relations of capitalists and laborers. Omitted in 1915-1916.

3 hours, one semester.

Professor Burke.

30. Advanced Economics.

A careful and critical study of economic theory, especially the problems of the distribution of wealth.

3 hours, second semester.

Professor Burke.

35-36. Advanced Accounting.

A consideration of the more complicated problems of accounting. Partnership accounting, corporation accounting, holding companies, mergers, fiduciary accounting,

cost accounting, state commission and inter-state commerce procedures, etc.

Prerequisite, Course 5-6.

2 hours of lecture and recitation and 1 laboratory period, throughout the year (6 units).

Mr. Johnston.

38. International Law.

A study of the rules governing the relations of nations in peace and war with special emphasis on modern conditions.

3 hours, second semester.

Professor Burke.

Education

Professor Cook

UPPER DIVISION COURSES

Junior standing and History 1-2 are prerequisite to all courses in Education. An additional prerequisite for Courses 22 and 24 is Philosophy 2, completed or in progress.

21. History of Education. Earlier Period.

- (1) The course includes a brief study of prehistoric man and the probable beginnings of education, considers the intellectual conditions of ancient nations, and investigates the significance to civilization of the dark ages. Lectures, text, and supplementary reading. Given in alternate years with Course 3. Given in 1915-1916.

3 hours, first semester.

22. Science of Education.

- (3) The object of this course is a study of the individual. The forces contributing to his welfare are considered, emphasis being placed upon the laws of his response to guidance and training for the development of his life and character for service. Lectures and supplementary reading. Given in alternate years with Course 4. Not given in 1915-1916.

3 hours, second semester.

23. History of Education. Later Period.

- (2) The period from the renaissance to the present time is covered, particular attention being devoted to great thought movements and their bearing upon civilization and the advancement of learning. Lectures, text, and supplementary reading. Given in alternate years with Course 1. Not given in 1915-1916.

3 hours, first semester.

24. Philosophy of Education.

- (4) This course will include a study of the aim, the meaning, and the individual and social aspects of education, educational values, the curriculum, correlation of studies, interest, attention, the art of study. Text, lectures and supplementary reading. Given in alternate years with Course 2. Given in 1915-1916.

3 hours, second semester.

English

Professor Shearin

Professor Odell

Professor Cunningham

LOWER DIVISION COURSES

A. Elementary Composition.

To remove deficiencies in the English of the preparatory course. Must be passed, and the fact recorded, before any student will be ranked as a Junior. May be passed in any one of three ways: (a) By showing proficiency in the subject in connection with the work of English 1-2 or 3. (b) By making satisfactory improvement in connection with the work of English 1-2 or 3. (c) By taking a course in the subject. Any student failing to pass the requirement in one of these ways before the middle of the Sophomore year will be registered in English A for the following semester.

1 hour, second semester (1 unit).

Professor Odell.

1-2. Composition and Rhetoric.

- (1) Daily practice in oral and written composition, based on prose models. Descriptive, narrative, expository, and argumentative paragraphing. Long themes fortnightly. Required for graduation.

2 hours, throughout the year (4 units).

Professor Odell.

3. Advanced Composition.

- (2) Exposition and argumentation. Study of models and textbook. Daily practice, oral and written, in the preparation and presentation of material. Required for graduation.
Prerequisite, Course 1-2.
2 hours, first semester.

Professor Shearin.

9. Public Speaking.

- (8) Practice in the more usual and practical forms of public address, with some study of the principles of vocal expression. Open to only the first ten applicants.
Prerequisite, Course 3.
2 hours, first semester.

Professor Shearin.

10. Oral Debate.

- (9) Written and oral work. Analysis, brief-making, and debating. The class is divided into two sections, each debating once a week upon a question previously assigned. Open to only the first ten applicants.
Prerequisite, Course 3.
2 hours, second semester.

Professor Shearin.

Note—Any two of the courses numbered from 11 to 16 inclusive may be taken to satisfy the requirement in English Literature.

11. Early Nineteenth Century Prose.

- (5) Lamb, De Quincey, Landor, Macauley, and their contemporaries. A study of representative works of these writers, with special

reference to the qualities and varieties of prose style.

3 hours, first semester.

Professor Odell.

12. Victorian Prose Writers.

(6) Carlyle, Ruskin, Arnold, Stevenson, and their contemporaries.

3 hours, second semester.

Professor Odell.

13. The Romantic Movement.

A study of the romantic movement of the late eighteenth and early nineteenth centuries, with especial attention to the writings of Burns, Wordsworth, Coleridge, and Scott.

3 hours, first semester

Professor Cunningham.

14. Nineteenth Century Poetry.

A virtual continuation of the above Course, with especial attention to the writings of Byron, Shelley, and Keats.

3 hours, second semester.

Professor Cunningham.

15. Tennyson.

A study of the writings of Alfred Tennyson.

3 hours, first semester.

Professor Cunningham.

16. Browning.

(22) A study of the writings of Robert Browning.

3 hours, second semester.

Professor Cunningham.

18. History of English Literature.

A historical and critical survey of the chief periods of English Literature, with abundant reading of illustrative examples. Written reports, based upon work done in the Library.

3 hours, second semester.

Professor Shearin.

UPPER DIVISION COURSES

Courses 1-2 and 3, together with any two of the courses numbered from 11 to 16 inclusive, are prerequisite to all Upper Division courses.

23. The Evolution of the Drama.

Outline of the rise of the drama; Liturgical forms; folk-plays; scholastic types; masques, etc.; Shakespeare's predecessors.

3 hours, first semester.

Professor Shearin.

24. Shakespeare.

(12) About fifteen plays read in chronological order, with especial attention to the development of Shakespeare's mind and art. Given in alternate years with Course 34. Not given in 1915-1916.

3 hours, second semester.

Professor Shearin.

25. The Earlier Novelists.

(13) The development of prose fiction throughout its formative period; Jane Austen, Scott,

Dickens, Thackeray, George Eliot, and their American contemporaries. Given in alternate years with Course 31. Not given in 1915-1916.

3 hours, first semester.

Professor Odell.

26. Short Story Writing.

- (14) A course in short story writing based on a study of masterpieces of the art, with especial reference to principles of construction. Given in alternate years with Course 42. Not given in 1915-1916.

2 hours, second semester.

Professor Odell.

28. Restoration and Eighteenth Century Literature.

- (16) A survey of the leading poets and prose writers from Dryden to Burns; the age of classicism; the rise of the romantic school. Given in alternate years with Course 36. Given in 1915-1916.

3 hours, second semester.

Professor Odell.

29-30. Old English.

- (19) First semester: The outlines of Old English grammar, and reading. Second semester: The Beowulf. During the year: English literature from the beginning to the Norman Conquest.

3 hours, throughout the year (6 units).

Professor Shearin.

31. The Later Novelists.

- (21) Meredith, Hardy, Stevenson, Howells, Mrs. Ward, Henry James, De Morgan, and others. Given in alternate years with Course 25. Given in 1915-1916.

3 hours, first semester.

Professor Odell.

32. Chaucer.

- (20) A detailed study of most of the Canterbury Tales, and of the minor poems. Given in alternate years with Course 40. Not given in 1915-1916.

3 hours, second semester.

Professor Shearin.

34. Shakespeare and Later Contemporaries.

Selected plays of Shakespeare (not read in Course 24) and of his later Jacobean contemporaries, with especial reference to Johnson. The history of the stage until the Puritan suppression of the theatre. Given in alternate years with Course 24. Given in 1915-1916.

3 hours, second semester.

Professor Shearin.

35. American Literature.

A general survey, with copious readings from Franklin, Freneau, Bryant, Irving, Cooper, Poe, Emerson, Thoreau, Longfellow, Webster, Whittier, Hawthorne, Holmes, Lowell, Whitman, Lanier, Sill, Stedman, Gilder, Hovey, and contemporary writers.

3 hours, first semester.

Professor Odell.

36. American Authors.

An intensive study of one important author each year, together with the great national or intellectual movement to which he belongs. Given in alternate years with Course 28. Not given in 1915-1916.

3 hours, second semester.

Professor Odell.

37. The Elizabethan Age and the Puritan Period.

(15) A course in the poetry of these periods, with emphasis upon the writings of Spenser and Milton.

3 hours, first semester.

Professor Cunningham.

38. World Classics.

Lectures upon certain of the world's masterpieces from early times to the present. Reading in translation of several examples, Sanskrit, Hebrew, Greek, Latin, Italian, Spanish, French, and German.

3 hours, second semester.

Professor Cunningham.

40. History of the English Language.

A study of the basal principles and phenomena of historical English grammar, by means of text-book, lectures, and the solution of numerous assigned problems. Given in alternate years with Course 32. Given in 1915-1916.

Additional Prerequisite, Course 29.

3 hours, second semester.

Professor Shearin.

42. Editorial and Critical Writing.

A study of these types of composition, as seen in current periodical literature of high quality. Two short articles are written weekly. Given in alternate years with Course 26. Given in 1915-1916.

2 hours, second semester.

Professor Odell.

French

Professor Bell

LOWER DIVISION COURSES

1-2. Elementary.

- (1) First semester: Thorough drill in fundamental rules of grammar with daily oral and written exercises. Reading short stories and conversation on text read.

Second semester: Drill on irregular verbs, idioms, elements of syntax. Reading of prose by modern authors. Easy composition. Special attention is given to acquiring a vocabulary. French being a living language, great attention is paid, in this and the following courses, to correct pronunciation and accentuation.

4 hours, throughout the year (8 units).

3-4. Modern Prose and Dramatic Writers.

- (2) First semester: General review of grammar, dictation in French, written and oral composition. Reading: Short stories by modern authors, at least one modern play. Conversation based upon the texts read.

Second semester: Written and oral composition. Reading: One or two modern plays, modern prose. Written resumes in French and practice in conversation.

Prerequisite, admission subject 15a² or Course 1-2.

3 hours, throughout the year (6 units).

UPPER DIVISION COURSES

21-22. Composition and Classics.

- (3) First semester: Advanced composition. Reading: Prose by Sand, Balzac, Rostand and others. Themes and conversation on works read. Sight translation of prose. Classics by Moliere, Racine and others.

Second semester: Advanced composition. Reading: History of France, conducted in French, with written exercises on assigned topics.

Prerequisite, Course 3-4.

3 hours, throughout the year (6 units).

23-24. History of French Literature.

- (4) This course is intended to give the student ample practice in French conversation while affording a bird's-eye view of what France has done and is doing in the world of thought. Outside reading of some of the works of certain authors, with written reports, will be required. Difficult composition and a review of grammatical principles will be given from time to time.

Prerequisite, Course 21-22.

3 hours, throughout the year (6 units).

Geology and Mineralogy

Professor Eggleston

1-2. General Geology.

Dynamical, structural, and historical geology. Lectures, laboratory exercises, and excursions. Some knowledge of chemistry, physics, zoology, and botany is desirable.

3 hours of lectures and 1 three-hour laboratory period, throughout the year (8 units).

3-4. Mineralogy.

This course includes elementary crystallography, blowpipe analysis, descriptive and determinative mineralogy. The study of crystal models and natural crystals is followed by practice with the blowpipe in the qualitative analysis of minerals. The second semester is devoted mainly to the study of, and a drill in the recognition of the more important minerals. Some knowledge of chemistry is desirable.

1 hour lecture and 1 three-hour laboratory period, throughout the year (4 units).

German

Professor Moll

LOWER DIVISION COURSES

1-2. Elementary German.

- (1) The essentials of grammar; drill in pronunciation; practice in speaking and writing Ger-

man; dictation and translation at hearing; reading at sight; reading of short, interesting stories.

4 hours, throughout the year (8 units).

3-4. Modern Prose and Poetry.

- (2) Selections from modern prose writers, poems and a drama from either Lessing or Schiller; composition and conversation.

Prerequisite, Admission Subject 15b² or Course 1-2.

3 hours, throughout the year (6 units).

UPPER DIVISION COURSES

21-22. The Classical Writers of the Eighteenth Century.

- (3) Dramas of Lessing, Schiller and Goethe; Lyrics and ballads of Schiller and Goethe. Composition and conversation.

Prerequisite, Course 3-4.

3 hours, throughout the year (6 units).

23-24. The Drama of the Nineteenth Century.

- (5) Selected dramas of Kleist, Grillparzer, Hebbel, Hauptman, Suderman, and others. Advanced composition. Given in alternate years with Course 25-26. Not given in 1915-1916.

Prerequisite, Course 21-22.

3 hours, throughout the year (6 units).

25-26. The Novel of the Nineteenth Century.

- (6) Representative novels of Hauff, Freytag, Spielhagen, Heyse, Keller, and others. Advanced composition. Given in alternate

years with Course 23-24. Given in 1915-1916.

Prerequisite, Course 21-22.

3 hours, throughout the year (6 units).

Greek

Professor Ward

LOWER DIVISION COURSES

1-2. Elementary.

(A) Beginner's book, Xenophon's *Anabasis*.

4 hours, throughout the year (8 units).

3-4. Lysias and Homer.

(B) Easy selections from Lysias, or an equivalent. Homer's *Iliad*.

Prerequisite, Admission Subject 8b or Course 1-2.

3 hours, throughout the year (6 units).

5. Euripides.

(3) Iphigenia among the Taurians, and Alcestis. An introduction to Greek tragedy. Study of meters and the Greek stage.

Prerequisite, Course 3-4.

3 hours, first semester.

6. Thucydides, Demosthenes.

(4) Thucydides, Book VII. Demosthenes, *Philippics*. Introduction to two important periods of Greek history. Collateral reading.

Prerequisite, Course 5.

3 hours, second semester.

7. Greek Life.

A course of lectures on Greek life, supple-

mented by required reading and written tests. Knowledge of Greek not required.

Open to all students.

2 hours, first semester.

10. Prose Composition.

(8) To follow Course 5.

2 hours, second semester.

UPPER DIVISION COURSES

Prerequisite, Course 5 or 6. Two upper division courses are offered each year.

21. Plato.

(11) Republic. Selections equivalent in amount to the Gorgias. A course valuable not only for students specializing in Greek, but for those pursuing ethics, sociology or education as well. The place of Plato in Greek philosophy.

3 hours, first semester.

22. Aeschylus, Sophocles.

(14) Aeschylus: Prometheus or Agamemnon.
Sophocles: Oedipus the King or Antigone.

3 hours, second semester.

23. Aristophanes.

(15) Clouds, Frogs. Comparison of Greek comedy and tragedy. Comedy as a mirror of the times.

3 hours, first semester.

24. Odyssey.

(16) First twelve books. Special study of Greek mythology. Literary influence of Homer.

3 hours, second semester.

History and Political Science

Professor Cleland

Associate Professor Paul

Professor Ward (Classical Dept.)

LOWER DIVISION COURSES

1-2. General History.

- (1) A survey of the development of western civilization from the earliest times to the end of the nineteenth century. This course will be conducted as a lecture course with frequent examinations and oral reports upon supplementary readings.

3 hours, throughout the year (6 units)

Associate Professor Paul.

3-4. History of England.

- (2) A comprehensive study of the development of English history from the Norman Conquest to the end of the nineteenth century.

3 hours, throughout the year (6 units).

Professor Cleland.

UPPER DIVISION COURSES

Course 1-2 is prerequisite to all upper division courses in this department, and Course 3-4 is strongly recommended.

21-22. History of the United States During the Nineteenth Century.

(5)

A study of the political history of the United States since the downfall of the Federalist Party. Especial emphasis will be laid upon

the growth of parties and the problems of the Civil War and Reconstruction. Given in alternate years with Course 29-30. Not given in 1915-1916.

3 hours, throughout the year (6 units).

Professor Cleland.

23-24. Europe Since 1815.

- (6) A study of the development of Modern Europe, with particular reference to the rise of nationalities and the establishment of colonies. The student should have a reading knowledge of French or German.

Additional prerequisite, Junior standing.

3 hours, throughout the year (6 units).

Professor Cleland.

25. History of Greece.

- (3) A study of the history of Greece with particular attention to the ages of Pericles and Demosthenes. Lectures, assigned reading.

3 hours, first semester.

Professor Ward.

26. History of Rome.

- (4) A general survey of the history of Rome to the fall of the Western Empire. Lectures, assigned reading.

3 hours, second semester.

Professor Ward.

27-28. Constitutional History of England.

An account of the origin and growth of English political institutions. Of especial value to students expecting to study law.

Additional prerequisite, Course 3-4.

2 hours, throughout the year (4 units).

Professor Cleland.

29-30. The Conquest of the Continent.

A study of the exploration and settlement of the West from the days of the early Spanish adventurers to the acquisition of California by the United States. The student should have a reading knowledge of Spanish or French. Given in alternate years with Course 21-22. Given in 1915-1916.

Additional prerequisite, Junior standing.

3 hours, throughout the year (6 units).

Professor Cleland.

31. Relations of the United States with the Orient.

An account of the origin and development of the interest of the United States in China, Japan, and the Philippine Islands.

Additional prerequisite, Junior standing.

3 hours, first semester.

Professor Cleland.

41. Constitutional Government in the United States.

A detailed study of the genesis and nature of the Constitution and of the workings of constitutional government in the United States.

Additional prerequisite, History 3-4, Economics 1-2, Junior standing.

3 hours, first semester.

Professor Cleland.

Associate Professor Paul.

42. Constitutional Government in Europe.

Analytic and comparative study of the constitutions of the principal European states. Lectures and recitations.

Additional prerequisite, History 3-4, Economics 1-2, Junior standing.

3 hours, second semester.

Associate Professor Paul.

44. Municipal Government.

A comparative study of municipal government in the United States and in Europe.

Additional prerequisite, History 3-4, Economics 1-2, Junior standing.

3 hours, second semester.

Professor Cleland.

History of Art

Professor Cunningham

1. Architecture and Sculpture.

Outline history of the development of architecture and sculpture from the earliest times to the present. Class study of lantern pictures. Individual collection of pictures of different periods.

3 hours, first semester.

2. Painting.

A study of painting from the Renaissance period to the present time. The philosophy of beauty. Class study of lantern pictures. Individual collections.

3 hours, second semester.

Latin

Professor Ward

LOWER DIVISION COURSES

5. Livy.

- (1) The larger portion of Books XXI. and XXII. is read, with particular attention to the syntax and Livy's qualities as a writer and historian.

Prerequisite, Admission Subject 7.

3 hours, first semester.

6. Horace and Cicero.

- (2) Horace: Odes and Epodes. Cicero: De Amicitia or De Senectute. Lyric meters.

Prerequisite, Course 5.

3 hours, second semester.

7. Plautus and Terence.

- (3) Plautus: Captivi and Trinummus. Terence: Phormio. Meters, early forms and constructions, Roman and Greek life.

Prerequisite, Course 6.

3 hours, first semester.

8. Tacitus, Pliny the Younger.

- (4) Tacitus: Agricola and Germania. Pliny the Younger: Selected letters. Social and political conditions under the empire.

Prerequisite, Course 7.

3 hours, second semester.

9. Prose Composition I.

- (5) Prerequisite, Course 5, completed or in progress.

2 hours, first semester.

10. Prose Composition II.

- (6) Prerequisite, Course 5.

2 hours, second semester.

UPPER DIVISION COURSES

Course 8 is the common prerequisite for all upper division courses in this department. Two of these are offered each year.

21. Horace and Juvenal.

- (10) Horace: Satires and Epistles. Juvenal: Selected Satires.

3 hours, first semester.

23. Seneca.

- (15) Tragedies: Hercules Furens, Troades, Medea. Comparison with the masters of Greek tragedy, particularly Euripides. Seneca's handling of Greek meters and mythology.

3 hours, first semester.

24. Vergil.

Aeneid VII.-XII. and Georgics, with special attention to the author's poetic art and genius and to the evidences of patronage afforded by his works.

3 hours, second semester.

26. Tacitus.

- (16) Selections from the Annals. Collateral studies in the history of the empire.

3 hours, second semester.

27. **Lucretius.**

- (17) De Rerum Natura: Books I., III., and V., with extended sight reading in the other three books. The Epicurean system and its poetic treatment at the hands of Lucretius.

3 hours, first semester.

Mathematics and Astronomy

Professor Allen

MATHEMATICS

LOWER DIVISION COURSES

1. **Plane and Spherical Trigonometry.**
- (2) The development of the general formulae of trigonometry. The theory and use of logarithms. The application of trigonometry to numerous problems in plane and spherical mensuration.

Prerequisite, Admission Subjects 2 and 3.

3 hours, first semester.

2. **Solid Geometry.**
- (1) The properties of straight lines and planes, of dihedral and polyhedral angles, of projections, of polyhedrons, including prisms, pyramids and the regular solids, of cylinders, cones and spheres, of spherical triangles, and the measurement of surfaces and solids.

Prerequisite, Admission Subjects 2 and 3.

3 hours, second semester.

3. **College Algebra.**

This course includes the development and

application of the binomial theorem and of the exponential and logarithmic series, permutations and combinations, and the theory of equations.

Prerequisite, Admission Subjects 2 and 3.
3 hours, first semester.

4. **Plane Analytics.**

A study of analytic methods, the analytic geometry of the straight line, the circle, and the conic sections, and investigation of the general equation of the second degree.

Prerequisite, Admission Subject 12a² or Course 1.

3 hours, second semester.

6. **Surveying.**

The department is equipped with a transit, Y level, Gunter's chain, steel tape, leveling rod, planimeter, slide rules, highly graduated protractor, parallel rules, etc. The principles of land surveying, irrigation, and railroad engineering will engage the attention of the class in actual field work, and the reduction of the field notes to plots drawn to scale.

Prerequisite, Course 1 and 2.

3 hours, second semester.

UPPER DIVISION COURSES

These will be counted as Upper Division courses only when preceded by 1, 2, 3, and 4, but may be taken as Lower Division courses with the prerequisites named below.

Physics 23-24 and Astronomy 2 may be counted as Upper Division courses in Mathematics.

21. Differential Calculus.

- (9) The principles and formulae of differential calculus, and the application to such problems as maxima and minima, indeterminate forms, expansion of series, etc.

Prerequisite, Courses 3 and 4.

3 hours, first semester.

22. Integral Calculus.

- (10) The principles and formulae of integral calculus, with application to problems in integration, such as lengths of curves, areas, volumes, etc.

Prerequisite, Course 21.

3 hours, second semester.

23. Theory of Equations.

- (11) The theory of determinants; the theory, analysis, and solution of higher numerical and algebraic equations.

Prerequisite, Courses 1 and 3.

3 hours, first semester.

24. Higher Analytics.

- (12) A more advanced course than Course 4, including a study of higher plane curves and the elements of solid analytic geometry.

Prerequisite, Course 4.

3 hours, second semester.

ASTRONOMY

1. General Astronomy.

A course in descriptive astronomy. Simple problems and questions, involving the funda-

mental principles of astronomy. Study of nebulae, planets, and constellations, with the telescope.

Prerequisite, Admission Subject 12a² or Mathematics 1.

3 hours, first semester.

2 **Practical Astronomy.**

Lectures and instrumental work. The determination of time, latitude, and longitude, and the computation of current eclipses and occultation of stars.

Prerequisite, Admission Subject 4b, Mathematics 4, Astronomy 1.

3 hours, second semester.

Philosophy

Professor Burt

LOWER DIVISION COURSES

2. **Psychology.**

- (1) Psychology, descriptive and explanatory. A study of the most general and elementary forms of consciousness. Ladd or equivalent is used as a text. Required for graduation.

Prerequisite, Sophomore standing.

3 hours, second semester.

3 **Logic.**

- (2) The principles of Deductive and Inductive Logic are studied and applied in practical work. The purpose is so to familiarize the student with the laws of thought that they

may be of practical value. Required for graduation.

Prerequisite, Course 2.

3 hours, first semester.

UPPER DIVISION COURSES

21. History of Ancient Philosophy.

- (4A) An examination of the thought of the Greek period with special emphasis upon the systems of Plato and Aristotle.

Prerequisite, Junior standing, Courses 2 and 3.

3 hours, one semester.

22. History of Modern Philosophy.

- (4B) An examination of the principal systems of modern thought from Bruno to the present day. Omitted in 1915-1916.

Prerequisite, Junior standing, Courses 2 and 3.

3 hours, one semester.

23. Ethics.

- (3) The history of ethical theory; its importance; the basis for moral obligation and the resultant duties to God and man. Mackenzie or equivalent is used as a text.

Prerequisite, Courses 2 and 3.

3 hours, first semester.

24. Theism.

- (5) A study of theistic arguments together with an examination of the anti-theistic theories.

Prerequisite, Courses 2 and 3.

3 hours, second semester.

26. Comparative Religions.

- (6) A study of the great religions of the world, emphasizing the divine origin and transcendent value of Christianity as the only religion for the world.

Prerequisite, Junior standing, Course 2.

2 hours, one semester.

Physical Training

Joseph A. Pipal, Director

Mrs. Joseph A. Pipal, Director for Women

The indoor work of this department will be suspended for the year 1915-1916, owing to unsettled conditions on the new campus.

Ordinarily it is required of all Freshmen and Sophomores not excused on account of physical disability. On entering college each student is given a thorough physical examination, which forms the basis for special prescriptive work. Students having organic heart trouble or any other weakness which makes it dangerous for them to indulge in vigorous exercise are not allowed to participate in athletic competition or heavy gymnastics.

The course is graded—elementary, intermediate and advanced—thus offering a change of work each year. Under the supervision of the director, students may elect out-of-door athletics in place of indoor gymnastics.

Physics

Professor Wolfe

LOWER DIVISION COURSES

1-2. General Physics.

- (1) A systematic development of the fundamental ideas and principles of physics is the aim of this course. The lectures include both elementary mathematical treatments and full experimental demonstrations.

Kimballs' College Physics, supplemented by Sabine's Laboratory Manual, is used as a textbook. The laboratory work consists of the measurement with standard instruments of such physical quantities as moments of inertia, g (two methods), surface tension, density, elasticity; pitch and speed of sound; specific heat, mechanical equivalent of heat; electro-magnetic, electro-chemical, and electro-thermal equivalents, intensity of the earth's field and magnetic moment; optical constants of lenses and mirrors, indices of refraction, and wave lengths of light.

N. B.—One extra lecture per week and one extra laboratory period per week through one semester are required of those who have not had high school Physics. This extra work does not count toward graduation.

Prerequisite, Admission Subject 12a², or Mathematics 1 completed or in progress.

3 hours of lectures and recitations and one laboratory period, throughout the year (8 units).

4 Thermodynamics.

- (4A) The relation between heat and other forms of energy are discussed in this course. Instruction will be by lectures and prescribed reading. Edser's "Heat" will be used as text. Omitted in 1915-1916.

Prerequisite, Course 1-2; Mathematics 21-22, completed or in progress.

3 hours, second semester.

UPPER DIVISION COURSES**21. Optical Measurements.**

- (2A) In this course the theories of geometrical and physical optics are developed, and are verified by exact measurements in the laboratory. Edser's "Light" is the text book.

Prerequisite, Course 1-2; Mathematics 21-22, completed or in progress.

3 hours of lectures and recitations and 1 laboratory period, first semester (4 units).

22. Electrical Measurements.

- (2B) In this course the lectures deal with the theory of the methods of measurement employed in the laboratory, and with industrial applications. Hadley's "Magnetism and Electricity" is the text-book.

Prerequisite, Course 21 Mathematics 21-22, completed or in progress.

3 hours of lectures and recitations and 1 laboratory period, second semester (4 units).

23-24. Analytical Mechanics.

- (3) This course gives a comprehensive survey of both statics and dynamics, following Hoskin's "Theoretical Mechanics." It is intended for Juniors who have taken calculus, but Sophomores who are taking calculus at the same time may be admitted by consent of the instructor.

Prerequisite, Course 1-2; Mathematics 21-22, completed or in progress.

5 hours of lectures and recitations, throughout the year (10 units).

25. The Electron Theory.

- (4B) The last few years have witnessed discoveries which are rapidly leading to a unitary view of the whole subject of electricity, under the name of the "Electron Theory." These discoveries are taken up and interpreted in this course. The lectures will be supplemented by outside reading. Omitted in 1915-1916.

Prerequisite, Course 1-2; Mathematics 21-22, completed or in progress.

3 hours, first semester.

Sociology

Professor Stevenson

All courses in Sociology are elective. They are open to any student who can meet the restrictions as to prerequisites.

LOWER DIVISION COURSES

1. Elementary Sociology.

A general survey of the facts of society preparatory to the critical study of social theory. The text-book will be supplemented by lectures and readings and by lantern slides that illustrate social classes, customs and institutions, and the physical basis of society.

Prerequisite, a year of Economics.

3 hours, first semester.

UPPER DIVISION COURSES

History 1-2 will be a prerequisite to all Upper Division courses in Sociology after 1915-1916.

22. Principles of Sociology.

- (2) An introduction to the theory of society. The various conceptions of Sociology; its relation to other social sciences; its special problems and the laws that govern their solution and incidental discussion of social conditions to establish and to illustrate social theory. Lectures and text-book will be supplemented by a study of actual social conditions, reports, and papers.

Prerequisite, Course 1.

3 hours, either semester.

23. Social Psychology.

- (3) The nature, formation, and manifestations of the social mind, and its reaction upon the individual mind and conduct. Illustrations of phases of the social mind will be sought in contemporary society, and an effort made to interpret them in terms of psychological principles.

Prerequisite, Course 22.

3 hours, first semester.

24. Social Pathology.

- (4) A general study of the weaknesses and diseases of society, and the application of sociological principles to charity, criminology, and constructive social work. Los Angeles offers ample opportunity for field work in the many conditions and institutions that illustrate nearly every phase of social health and social disease.

Prerequisite, Course 22.

3 hours, second semester.

25. Charities and Corrections.

- (5) A critical study of selected subjects treated less fully in Course 24; preferably, the origin, nature, and treatment of the defective, dependent, and delinquent classes, and an intensive study of specific problems in criminology or in preventive philanthropy. Omitted in 1915-1916.

Prerequisite, Course 24.

2 hours, first semester.

Spanish

Professor Bell

Mr. McConnell

LOWER DIVISION COURSES

1-2. Elementary.

- (1) Hills and Ford's Spanish Grammar. Reading or short and easy stories and plays. Doce Cuentos Escogidos; Alarcón, El Capitán Veneno; Valera, El Pájaro Verde; Galdós, Marianela. Composition and conversation,

4 hours, throughout the year (8 units).

Mr. McConnell.

3-4. The Modern Novel and Drama.

- (2) Galdós, Doña Perfecta; Valdés, La Hermana San Sulpicio; Valera, El Comendador Mendoza; Pereda, Pedro Sánchez; Echegaray, El Gran Galeoto. Advanced grammar and composition.

Prerequisite, Admission Subject 15c² or Course 1-2.

3 hours, throughout the year (6 units).

Mr. McConnell.

UPPER DIVISION COURSES

21-22. Conversation and Composition.

- (3) This course is conducted mainly in Spanish. Current events and some of the best modern novels and dramas will be read and discussed. An opportunity will be given to the students

of coming in contact with educated Mexicans who do not know English. This will afford ample opportunity of hearing the Castilian spoken without any attempt at avoiding idioms. Reviews of important points of grammar and written composition will be given as needed.

Prerequisite, Course 3-4.

3 hours, throughout the year (6 units).

Professor Bell.

Schedule of Lectures and Recitations

The schedule of classes for the first semester is shown on the left of the page, that of the second semester on the right. The columns represent the five days in the week from Monday to Friday. The figures in the columns stand for periods of the day at which classes are held, viz:

- 1 beginning at 8:30 a.m.
- 2 beginning at 9:45 a.m.
- 3 beginning at 10:40 a.m.
- 4 beginning at 11:35 a.m.
- 5 beginning at 12:30 p.m.
- L, beginning at 1:30 p.m.

L is a laboratory or field period, equalling three ordinary periods in length. Chapel holds from 9:25 a.m. to 9:40.

The numbers of the courses correspond with those found under "Departments of Instruction." Any number from 1 to 20 inclusive indicates a Lower Division course. Any number higher than 20 indicates an Upper Division course. A number preceding the name of the subject means a first semester course. A number following the name of the subject means a second semester course. One number preceding and another following means a year course. The same number preceding and following means a one semester course which may be taken either semester. The small figures, having the appearance of exponents, indicate sections of classes. Courses with no periods assigned will have their schedule arranged when the classes are formed.

First Semester

Second Semester

M	T	W	T	F		M	T	W	T	F
	1	1		1	1 Astronomy					
					 Astronomy 2.....					
	2	2			1 ¹ Biblical Literature					
				2	1 ² Biblical Literature					
					 Biblical Literature 2 ¹	2		2		
					 Biblical Literature 2 ²		2			2
	3		3		3 Biblical Literature					
					 Biblical Literature 4.....		3		3	
					 Biblical Literature 5.....		4		4	
	4		4		8 Biblical Literature.....					
					 Biblical Literature 9.....	3		3		
					 Biblical Literature 11.....			4		4
	3	3			12 Biblical Literature.....					
		4		4	13 Biblical Literature.....					
	1	1		1	1 Biology 2.....		1	1		1
	L	L			1L Biology.....					
					 Biology 2L.....		L	L		
					 Biology 6L.....				L	
					 Biology 8.....	3		3		3
L	3		3	L	11 Biology					

First Semester

Second Semester

M	T	W	T	F		M	T	W	T	F
					 Biology 12.....	L	3		3	L
			L		13L Biology 14L.....				L	
	3		3		}21 Biology					
L	L				 Biology 24..... }		3		3	
					25L Biology	L	L		L	
3		5		3	1 Chemistry 2.....	3		5		3
		L			1L Chemistry 2L.....			L		
3		3		3	3 Chemistry 4.....	3		3		3
L	L	L			3L Chemistry 4L.....		L	L		
L			L	L	5L Chemistry 6L.....	L			L	L
4				4	21 Chemistry 22.....	4				4
	L				21L Chemistry 22L.....		L			
					25 Chemistry 26.....					
					1 Drawing, Freehand 2.....					
					3 Drawing, Freehand 4.....					
					5 Drawing, Freehand 6.....					
					7 Drawing, Freehand 8.....					
					9 Drawing, Freehand 9.....					
					1 Drawing, Technical 1.....					
					3 Drawing, Technical 4.....					
L			L		5 Drawing, Technical 6.....	L			L	
					7 Drawing, Technical 8.....					
					9 Drawing, Technical 10.....					
					11 Drawing, Technical 12.....					
					13 Drawing, Technical 13.....					
3		3		3	1 Economics 2.....	3		3		3
					 Economics 4.....		4		4	5
L	1		1		5 Economics 6.....	L	1		1	
3		3		3	21 Economics					
2		2	1		23 Economics					
1	3		3		26 Economics					
					 Economics 30.....	1	3		3	
L		1		1	35 Economics 36.....	L		1		1
					 Economics 38.....	2		2	1	
	1	1		1	21 Education					
					 Education 24.....		1	1		1
					 English A.....					5
2		2			1 ¹ English 2 ¹	2		2		
	2			2	1 ² English 2 ²		2			2
2		2			3 ¹ English					
	2			2	3 ² English					
	4		4		9 English					
					 English 10.....	2				2
4		4		4	11 English					

First Semester					Second Semester					
M	T	W	T	F		M	T	W	T	F
					 English 12.....	4		4		4
4		4		4	 13 English					
					 English 14.....	4		4		4
	4		4	5	 15 English					
					 English 16.....		4		4	5
					 English 18.....	2		2	1	
3		3		3	 23 English					
					 English 28.....	3		3		3
1	3		3		 29 English 30.....	1	3		3	
3		3		3	 31 English					
					 English 34.....	3		3		3
	4		4	5	 35 English					
	2	5		2	 37 English					
					 English 38.....		2	5		2
					 English 40.....		4		4	5
					 English 42.....		4		4	
	1	1	1	1	 1 French 2.....		1	1	1	1
3		3		3	 3 French 4.....	3		3		3
1	3		3		 21 French 22.....	1	3		3	
5	5		5		 23 French 24.....	5	5		5	
3		3		3	 1 Geology 2.....	3		3		3
	L				 3 Geology 4.....		L			
2	L				 1 German 2.....	2	L			
	1	1	1	1	 3 German 4.....		1	1	1	1
3		3		3	 21 German 22.....	3		3		3
4		4		4	 25 German 26.....	4		4		4
5	5		5		 1 Greek 2.....	5	5		5	
	1	1	1	1	 3 Greek 4.....		1	1	1	1
1	3		3		 5 Greek	1	3		3	
	4		4	5	 Greek 6.....					
					 Greek 7.....		4		4	5
	2		2		 10 Greek					
					 21 Greek					
					 Greek 22.....					
5	5		5		 1 History 2.....	5	5		5	
	4		4	5	 3 History 4.....		4		4	5
1	3		3		 23 History 24.....	1	3		3	
4		4		4	 25 History					
					 History 26.....		4		4	4
2		2			 27 History 28.....	2		2		
3		3		3	 29 History 30.....	3		3		3
	1	1		1	 31 History					
	2	5		2	 41 History					
					 History 42.....		2	5		2
					 History 44.....		1	1		1

First Semester					Second Semester					
M	T	W	T	F		M	T	W	T	F
5	5		5		1 History of Art					
					 History of Art 2.....	5	5		5	
3		3		3	5 Latin					
					 Latin 6.....	3		3		3
5	5		5		7 Latin					
					 Latin 8.....	5	5		5	
					9 Latin					
					 Latin 10.....					
					21 Latin					
					 Latin 24.....					
	4		4	5	1 Mathematics					
					 Mathematics 2.....		4		4	5
4		4		4	3 Mathematics.....					
					 Mathematics 4.....	4		4		4
					 Mathematics 6.....		1	1		1
1	3		3		21 Mathematics					
					 Mathematics 22.....	1	3		3	
2		2	1		23 Mathematics					
					 Mathematics 24.....	2		2	1	
					 Philosophy 2.....	2		2	1	
2		2	1		3 Philosophy					
	1	1		1	21 Philosophy					
3		3		3	23 Philosophy					
					 Philosophy 24.....	3		3		3
					 Philosophy 26.....		2			2
		5			}A Physics					
L										
1	3		3		}1 ¹ Physics 2 ¹ }	1	3		3	
L						L				
1	3		3		}1 ² Physics 2 ² }	1	3		3	
L						L				
1	3		3		}1 ³ Physics 2 ³ }	1	3		3	
		L						L		
3		3		3	}21 Physics					
			L							
					 Physics 22..... }	3		3		3
							L			
	1	1	1	1	}23 Physics 24..... }		1	1	1	1
2		2				2		2		
1	3		3		1 Sociology					
3		3		3	22 Sociology 22.....	3		3		3
					23 Sociology					
					 Sociology 24.....	1	3		3	
	1	1	1	1	1 Spanish 2.....		1	1	1	1
3		3		3	3 Spanish 4.....	3		3		3
4		4		4	21 Spanish 22.....	4		4		4

Special Mention

The last week in January, a course of five lectures on "America's Higher Education" was delivered by Prof. Andrew Fleming West, Ph.D., LL.D., Hon. D. Litt., Dean of the Graduate School of Princeton University. From beginning to end, Alumni Hall, in which the lectures were given, was filled with students and invited friends, all of whom acknowledge their great debt to the speaker. Educationally, the course was of the highest value. Following is the list of topics treated: "College Preparation," "College Studies," "College Life," "Graduate Studies," "What Liberal Education Means."

During the second semester, Prof. George Winfield Scott, Ph.D., formerly of the department of International Law at Columbia University, in conjunction with Prof. Cleland, conducted a seminar course in "The Present European War." A large class enrolled, and the timeliness of the subject, taken with the able manner in which it was handled, rendered the work unusually profitable.

General Information

Registration and Class Standing

Registration. Every student is expected to register before or during the appointed registration days of each semester. Any one registering later than the first Friday of the semester will be charged a registration fee of two dollars. All college bills for the semester are to be settled or arranged for at the time of registration. A certificate of registration, signed by the Registrar and Business Manager, must be presented to the instructor of each class in which the student seeks to be enrolled. No one will receive credit for a course for which he has not been officially registered.

The semester hour is understood to mean one period in the classroom per week continued through a semester, three ordinary periods counting as one when devoted to laboratory or field work. Twelve semester hours is the minimum, and eighteen semester hours besides Physical Training the maximum for which any student may register. A student who fails in any semester to pass in eight semester hours will not be allowed to register the semester following.

Classification. The class in which a student is to be ranked is determined by the following scale of credits, each figure being the minimum for standing in the class named:

Freshman—15 entrance units.

Sophomore—24 units of college credit.

Junior—60 units of college credit.

Senior—90 units of college credit.

An average grade of 3.5 in the required number of units is necessary for promotion from class to class, and for graduation.

Marking System. Five passing grades of scholarship are in use, represented by Arabic numerals, as follows: 1 represents the first or maximum grade; 2, the second grade; 3, the third or medium grade, which is the grade of the average student; 4, the fourth grade; 5, the fifth, or minimum passing grade.

Ordinarily, in required Lower Division work, these grades should be distributed about as follows: grades 1 and 5, five per cent. each; grades 2 and 4, twenty per cent. each; grade 3, fifty per cent.; "inc." represents incomplete work; "con." represents a condition to be removed by examination; F represents a failure, to be removed only by repetition of the course.

While 5 is a passing grade in any subject, yet for class promotion and for graduation the student is required to maintain an average of 3.5 in the necessary number of units. The average maintained by each student will be indicated in his semester re-

ports and become a part of the permanent scholarship records.

The method of finding this average is to multiply the grade obtained in each subject by the number of units with which the subject is credited, add the products, then divide their sum by the total number of units earned in all subjects combined.

Subjects passed with a grade of 5 will not be recommended for credit in transferring to other institutions.

The head of any department may exclude from advanced classes a student, who, in his judgment, has failed to do satisfactory work in the lower classes.

Class Honors. First Honors are awarded on commencement day to those members of each of the four classes whose average grade for the year equals 1.3; Second Honors to those whose average equals 2.

To be eligible to these honors, one must have at the end of the year:

- a. No failures or unremoved conditions on the year's record.
- b. At least 24 units of college credit earned during the year.
- c. Rank in the next class.

Final Honors. On the same basis as above, Final Honors are awarded to those members of the graduating class who have won Class Honors each of the four years of their course, or whose average for the four years equals the average required for class honors. Students from other institutions entering

Occidental not later than the beginning of the Junior year will be eligible to Final Honors, provided, in the judgment of the Committee on Classification, their record for the preceding part of their course equals the standard named above.

Valedictory and Salutatory. The rank of Valedictorian is awarded to that member of each graduating class who stands highest in scholarship average for the entire course.

The rank of Salutatorian is awarded to that member of each graduating class who stands second in scholarship average for the entire course.

Students from other institutions entering Occidental later than the beginning of the Junior year are not eligible to these honors.

Attendance

The College requires of all students regular attendance at the chapel service and at all the classes to which they belong. A copy of the rules governing attendance may be obtained from the Dean.

Regulations Governing Social Life

The College provides places of residence for the students by means of a system of registered lodging and boarding places. All students must room in places approved by the Faculty. Students are required to keep reasonable hours and to conduct themselves with propriety at all times. A copy of the rules governing the social life of the College may be obtained from the Dean.

The Thursday Assembly

The Thursday Assembly (changed from Friday) is a distinguishing feature of Occidental life. At this assembly vital topics are discussed by eminent men and women from all parts of the world. Few lecture courses anywhere provide their patrons a richer or more varied program than that offered to the students of Occidental every week in the year, free of charge, from their own chapel platform. Its value as part of a college course can hardly be estimated. Here are a few names of the many who have been heard the past year: David Starr Jordan, Ex-President Fairbanks, August Schvan, Robert Freeman, J. Whitcomb Brougher, Zona Gale, Tuskegee Institute Singers, President Scherer, Hugh K. Walker, Dean West, Ex-President Warfield, "Chimmie" McFadden, President Carrier, Dean Healey, Ex-Senator Flint, John R. Mott.

High School Certificate

Graduates of Occidental may obtain the high school certificate in California on the same conditions as graduates of the State University, conditions which have been thus formulated by the State Board of Education:

High School Certificates may be issued under the provisions of Section 1521, subdivision 2 (a), and Section 1775, subdivision 1 (a), of the Political Code of California, as follows:

To candidates who have received the Bachelor's Degree from a college requiring not less than eight years of high school and college training, and who submit evidence that in addition to the courses required for the Bachelor's Degree they have successfully completed at least one year of

graduate study in one of the accredited institutions listed below,* which year of graduate study shall include one half-year of advanced academic study (part of the time, at least, being devoted to one or more of the subjects taught in the high school), and such other time in a well-equipped training school of secondary grade directed by the Department of Education of any one of these universities as may be necessary to fulfill the pedagogical requirements prescribed by this Board.

In lieu of the pedagogical training above prescribed, candidates may submit evidence showing that they are graduates of a California State Normal School, or other Normal School officially recognized by this Board as of equivalent rank, or have taught with decided success as regular teachers or as principals at least twenty months in any reputable school, elementary or secondary.

The institution granting the Bachelor's Degree, the institution in which the post-graduate academic study is pursued, and the institution in which the pedagogical work is done, shall each certify to the high character of the work accomplished under its direction, and to the personal fitness of the candidate.

*University of California
Catholic University of America
University of Chicago
Clark University
University of Colorado
Columbia University
Cornell University
Harvard University
University of Illinois
Indiana University
Iowa State University
Johns Hopkins University
Leland Stanford Junior University

University of Michigan
University of Minnesota
University of Missouri
University of Nebraska
Ohio State University
University of Pennsylvania
Princeton University
University of Southern California
University of Texas
University of Virginia
University of Washington
University of Wisconsin
Yale University

College Bills

General

Tuition, each semester.....	\$50.00
Graduation Fee	5.00

Laboratory

Biology 1L or 2L.....	\$ 4.00
Biology 11 or 12	3.00
Biology 22 or 24	5.00

Chemistry 1L, 2L, 21L, or 22L.....	5.00
Chemistry 3L, 4L, 5L, 6L, or 27L.....	10.00
Geology 3 or 4	1.50
Physics 1, 2, 21, or 22.....	3.00

Special

Late registration (see page 89).....	\$ 2.00
Examination at irregular time.....	2.00
Duplicate transcript of record.....	2.00

In addition, a breakage deposit of \$5.00 is required for each laboratory course in Chemistry. The balance remaining at the end of the course will be returned.

All college bills are payable in advance. Five per cent. will be added to all bills of the first semester not paid by November 15th, and to those of the second semester not paid by March 15th.

A diploma, or transcript of record to be used in transferring to another institution, will not be granted until all college bills have been paid in full.

No payments will be refunded for students who are dismissed or suspended or who leave College for any reason other than illness necessitating absence for more than half a semester. Not more than half the proportionate charges for such a period of absence will be refunded.

Men's Dormitory

Rooms in James Swan Hall are charged for at the rate of \$45 a semester for each occupant, except the two end suites on the top floor, which ac-

commodate one person each and rent at \$60. Steam heat and electric light are included in these rates. Cooking and the use of stoves is prohibited. Excellent meals may be obtained in the college cafe near by. The College supplies furniture and bedding with sanitary laundering of the bedding and complete care of the rooms. Towels are furnished by the young men and go with their personal laundry. Rental is payable in advance, and a deposit of \$5, to be applied on the rental, is required at the time of engaging the room. This deposit will not be returned in case of failure to occupy the room. Where a student is compelled to withdraw on account of sickness a reasonable refund will be made. All damage to room or furniture will be charged to the occupant. The College reserves the right to exclude from James Swan Hall any one who proves to be a disturber or an undesirable character. For description of building, see page 20. Applications for rooms may be sent to the Registrar, Occidental College, Los Angeles.

Homes for Young Women

While no dormitory for young women has yet been erected, several places maintained by private parties afford the chief advantages of dormitory life. One such place, presided over by two former teachers and within three squares of the campus, offers accommodations for ten. Ten more are provided for on the bungalow plan in two cottages situated together, the lady who owns them living in one. Moreover, quite a number of rooms will be pro-

vided in reputable homes, not far from the College, with hundreds of others accessible by trolley. Young ladies from the best families will not lack for safe and refined places in which to make their homes during the four years spent at Occidental.

Cafe

At the College cafe and dining hall wholesome food is served at small cost. Until the erection of a permanent commons, it will be located in Fowler Hall. While it provides a convenient and inexpensive place for meals, it also affords a pleasant social center, especially at the noon lunch.

Boarding House Register

A system of registered lodging and boarding houses provides places of residence for all students at a cost varying from \$20 to \$25 per month. New students will be provided on their arrival with a complete list of such places approved by the College.

Expenses and Self Help

The necessary expenses of the student range from \$275 to \$400 a year.

Students who desire to earn their way through college should register with the Employment Bureau conducted by the Christian Associations. Opportunities for self-support among the students are somewhat limited. The number who earn their entire expenses is comparatively small.

Scholarships

The College has a limited number of scholarships available for the relief of deserving students who are unable to pay tuition. In some cases the beneficiary is named by the donor, in others by the President or Board of Trustees. Every candidate for a scholarship must have his application indorsed by some person of recognized standing in his home neighborhood, it being understood that he intends to complete his course at Occidental College. Any one receiving such aid will be expected to maintain a creditable standing in his classes, to be economical in his expenditures, to abstain from the use of tobacco, and, in general, to show by his conduct that the assistance has been worthily bestowed. Address all communications regarding these scholarships to the President.

In addition to those named above, the Horace Cleland Scholarship, recently established by the Alumni Association, is awarded, for the Junior year only, to that member of each class who seems best entitled to it on the general basis of need and merit.

Competition for the Cecil Rhodes Scholarships is open to the young men of Occidental. One who passes the qualifying examination held in Los Angeles becomes eligible to appointment for a term of three years as Rhodes Scholar at Oxford, England, an expense fund of \$1500 a year being provided.

Student Loan Fund

There is a loan fund from which a worthy student in unusual need may borrow at four per cent.

interest a sufficient amount to meet a part or all of his tuition, giving his personal note as security. Such loans can be made only in case of real need and through personal conference with the President. Each applicant must furnish satisfactory references and will be expected to maintain a proper standard of scholarship and conduct.

Oratorical and Debating Contests

Intercollegiate Oratorical Contest. An oratorical contest between the colleges of Southern California is held annually. The preliminary contest at Occidental is under the direction of the Associated Students. The winner in this contest represents Occidental in the Intercollegiate. This year Mr. Howell Atwood, '17, was appointed as Occidental's representative.

Prohibition Oratorical Contest. Each year an oratorical contest is held under the auspices of the Students' Prohibition League, which is a branch of the Intercollegiate Prohibition Association. The subjects discussed are connected with the work of temperance reform. Two prizes, of \$15 and \$10, respectively, are offered to the winners of this contest by the Temperance Committee of the General Assembly of the Presbyterian Church in the U.S.A. In this year's contest the first prize was awarded to Charles Tidball, '16, and the second to Irene Truelssen, '18.

The Southern California Peace Society. An oratorical contest is held annually under the auspices of the Southern California Peace Society. The aim of the society is to bring about international disarmament. The local contest is under the direct charge of the student Oratorical Association, and the winner represents the college in the Intercollegiate Peace Oratorical Contest of Southern California. At the home contest, occurring April 30, the first prize was awarded to C. L. Barrett, '17, and the second to R. E. Kellogg, '18.

The Triangle Debate. The "Triangle Debate," between representatives of Occidental College, Pomona College and the University of Southern California, is an annual affair. Three debates on the same question take place simultaneously. Each institution is represented by six debaters, three of whom support the affirmative in the home contest, the remaining three supporting the negative at one of the other institutions. In the debate with Pomona this year Occidental was represented by Culbert Faries, '16, Russel Brougher, '18, Clifford Barrett, '17; in the debate with the University of Southern California, by Warde Fowler, '17, Kenneth Barager, '17, Raymond Buell, '18.

Other Debates of 1914-15. In a debate with Whittier College, held in January, Occidental was represented by Howell Atwood, '17, and Philip Matthews, '18. A debate between the young women of this institution and the University of Southern California was held April 29, in which Occidental was represented by Clarinda Corbin, '18, Helen Kemper, '15, and Irene Truelsen, '18.

Student Organizations

The Associated Students. The purpose of this organization is to control all student enterprises. All Occidental students are eligible to membership. At its organization, the Associated Students absorbed the Athletic Association, the Oratorical Association, and the Occidental Publishing Company. These enterprises are now under the direct control of a General Manager and under the general control of an Executive Committee, which is composed of the officers of the Association, the General Manager, and one representative of each of the following interests: Oratory, Athletics, Student Publications, the Alumni, and the Faculty.

All expenditures must be authorized by the Executive Committee; and every month a report of receipts and expenditures, after being duly audited, is published in *The Occidental*.

Christian Associations. The Young Men's and the Young Women's Christian Associations are both represented by strong organizations, being supported by a large majority of the students. The weekly meetings of the Associations are largely attended. Classes for systematic Bible study meet regularly.

Interest in missions is very strong, the Student Volunteer movement being well represented in both Associations. Both these organizations are always well represented in the State conferences at Asilomar.

An important feature of the work of the Associa-

tions is the Student Employment Bureau, which is conducted for the benefit of those desiring to earn their expenses during the college year. An information Bureau is also conducted by the Associations for the assistance of new students at the opening of the college year.

Literary Societies. The students of the College support three active literary societies: the Stevenson and the Lowell, composed of young men, and the Laurean, composed of young women. These societies hold weekly meetings for debating and other literary work.

Musical. The Mens' Glee Club continues to maintain its place among the successful organizations of the College. Besides furnishing the music at various services and exercises of the College, the club regularly makes a vacation trip to a number of the surrounding towns. It contributes in no small degree to the social life of its members and to the musical interests of the College. Membership is based upon ability displayed in competitive trials at the opening of the school year.

The Women's Glee Club, more recently organized, has won an established place in the life of the College and is always spoken of as a favorite attraction. Its concerts, both at home and in the nearby towns, are a pronounced success.

A student orchestra of twenty pieces gave its initial performance April 23. The approbation which it elicited and the evident need for an organization of this kind indicate that it is to be a permanent feature.

Student Publications

The Occidental, the College newspaper, appears each week of the College year. It is edited and managed by students of the College. An annual, La Encina, is published in May by the Junior class. A handbook of information is issued at the beginning of each year by the Y. M. C. A.

Form of Bequest

Those intending to devise property to Occidental College are requested to use the following form: "I hereby give, devise and bequeath unto the Occidental College of Los Angeles, State of California, the sum of.....Dollars."

For property other than money the form should be correspondingly varied.

Honors Awarded in 1914

Class Honors

First Freshman :

Harrison Baker
Sophie Hardy
Ruth Pierce
Samuel Van Orden Prichard

Second Freshman :

Park Davidson
Marguerite Furlong
Ernestine Adele Kinney
Albert Knoll Mitchell
Morgan Samuel Odell
Richard Dean Sias
Clarence Amos Wells

Second Sophomore :

Margaret Durfy
Marion Lowrie Haskell
Max E. Hayward
Ralph Benajah Potter
Charlotte Louise Sumner
Charles Taylor Tidball

First Junior :

Mae Thomson

Second Junior:

Pearl Margaret Adams
Lillian Elizabeth Beede
Frank Seymour Boice
Leroy Lowry Doig
Samuel Thomas Hayward
John Jay Hopkins
Margaret Wallace Lord
Helena Theresa McKelvey
Florence Margaret Moote
Ruth Smith
Theodore LeGrande Stearns
George Thorne

First Senior:

William Orr McConnell
Anna Almeda Pettit

Second Senior:

Francis Shaw Baer
Benjamin Willis Beede
Edith Sibyl Bryan
Edith May Hazlett
Helen Johnson
Harry Allister Kirkpatrick
Katherine W McClung
Mildred Taylor
Arthur Pryor Watts

Final Honors

First:

Frederick Walton Brown
Anna Almeda Pettit

Second :

Benjamin Willis Beede
Edith Sibyl Bryan
William Fiske Hannaford
Edith May Hazlett
Katherine W. McClung
Arthur Pryor Watts

Valedictory and Salutatory

Valedictory :

Anna Almeda Pettit

Salutatory :

William Orr McConnell

Society of the Olive Crown

Benjamin Willis Beede
Frederick Walton Brown
Edith Sibyl Bryan
Edith May Hazlett
William Orr McConnell
Anna Almeda Pettit

Degrees Conferred in 1914

Bachelor of Arts

Mary Mildred Aiken
A. Akimoto
Francis Shaw Baer
Benjamin Willis Beede
John Thomas Bickford
William Wallace Brier
Frederick Walton Brown
Edith Sibyl Bryan
Esther Cohn
Margaret Lantz Daniel
Day Ehrenfeld
William Fiske Hannaford
Edith May Hazlett
John Alexander Henderson, Jr.
Walter Heninger
William Mellors Henry
Hazel Chatfield Hunt
Helen Johnson
Thaddeus Crane Jones
Mildred Marie Keith
Grace Dorothea Kincaid
Katherine Wilms McClung
William Orr McConnell
Harold Bruce McDonald

Hugh Alin McNary
Harriet Edith Moore
Anna Almeda Pettit
Alonzo Ray Petty
Jessie Barnum Pratt
Dowena Jean Rogers
Louise Smith
Paul Tamura
Mildred Taylor
Grace Ann Wallace
Arthur Pryor Watts
Paul Thomas Young

Bachelor of Science

Fred Huestis Eldred
Harry Allister Kirkpatrick
Edwin Briggs Lawyer

Officers of the Alumni Association

1914-1915

President,

Harry C. Dane, 1902.

Vice-President,

Luella Rice, 1909.

Secretary,

Elizabeth Gardner, 1912.

Treasurer,

Watson B. Burt, 1908,

211 Van Nuys Building,

Los Angeles.

Alumni Representative,

Executive Committee Associated Students,

Prof. Robert G. Cleland, 1907.

Alumni Editor of "The Occidental,"

Katherine McClung, 1914.

Graduate Council

Term expiring June, 1915.

Bertha Boal, 1908
Howard Angus, 1913
Dr. Isabel Crowell, 1902
Philip Dodson, 1910
Harold Hopkins, 1911

Term expiring June 1916:

Prof. Robert G. Cleland, 1907
Mrs. Louise Patterson, 1911
Mrs. Mary R. McClung, 1911
Daniel S. Hammack, 1905
Edwin B. Lawyer, 1914

Term expiring June, 1917:

Harry C. Dane, 1902
Harry A. Kirkpatrick, 1914
Katherine W. McClung, 1914
Elizabeth Gardner, 1912
David R. Faries, 1911

Executive Committee of the Associated Students

1914-1915

President.....	Walter S. Young, '15
Vice-President.....	Florence D. Flippen, '15
Secretary.....	Marguerite A. Rogers, '15
General Manager.....	Harry A. Kirkpatrick, '14
Alumni Representative....	Prof. R. G. Cleland, '07
Editor "The Occidental".....	Willis C. LaMott, '15
Athletic Representative...	Samuel H. McClung, '16
Oratorical Representative.....	Millard M. Mier, '16
Faculty Representative.....	Professor Ward

Student Enrollment

1914-1915

Acosta, Faith Ramona	Pasadena
Adams, Pearl Margaret	Glendale
Allin, Hazel	Pasadena
Anderson, Carl William	Glendale
Anderson, Gladys Elizabeth	Glendale
Annin, William Clement	Los Angeles
Atwood, Jesse Howell	Pasadena
Baber, Albert James	Long Beach
Baker, Harrison Rich	Pasadena
Ball, Wayne Kraemer	Los Angeles
Barager, Kenneth Niles.....	Glendale
Barkley, Charles Everette	Phoenix, Ariz.
Barnhouse, Donald	Watsonville
Barrett, Clifford Leslie	Los Angeles
Bartlett, Herbert Jarvis	Pasadena
Batz, John Baptiste	Bairdstown
Beede, Lillian Elizabeth	Whittier
Bent, Avery Ballard	South Pasadena
Bercovitz, Zacharias	Los Angeles
Bettin, Alfred Vernon	Los Angeles
Betts, Warren Ford	Santa Monica
Biby, Harry Caswell	Los Angeles
Black, Janet Fuller	Eagle Rock

Blow, Charlotte	Pasadena
Blow, Richard Turnstall	Pasadena
Boice, Frank Seymour	Pasadena
Boice, Henry Gudgell	Pasadena
Borton, James Burnett	Long Beach
Borum, Jean Frances	Attica, Ind.
Bouick, Frank Jackson	San Anselmo
Bowman, Helen Erma	Kansas City, Mo.
Boyd, Gladys Ann	Los Angeles
Boyles, Arthur V.	Monrovia
Brandstetner, Carl F.	Los Angeles
Brougher, Russell Morse	Los Angeles
Brown, Roger Crafts	La Crescenta
Buell, Lester Hervey	Santa Barbara
Buell, Raymond Leslie	Santa Paula
Byram, Wilfred Carroll	Santa Ana
Campbell, Earl Albert	Huntington Park
Chaffee, Edmund Lyman	Phoenix, Ariz.
Chandler, Lawrence Frances	Glendale
Chapman, Leland Stanford	Los Angeles
Chester, Winfred Leonard	Monrovia
Clayton, Ruth Marie	Los Angeles
Clifford, Herbert George	Minneapolis, Minn.
Coe, Horace Clay	El Centro
Coffeen, John Michael	Pasadena
Collins, Richard Kent	Los Angeles
Collom, Charles Wesley	Los Angeles
Cook, John Wesley	Los Angeles
Cook, Mable Elizabeth	Los Angeles
Cook, William Paul	Phoenix, Ariz.
Corbin, Clarinda	Long Beach
Corbin, Mary	Long Beach

Crabtree, Ernie Katherine	Los Angeles
Crawford, Harriet May	Fresno
Creighton, Allen Miller	Phoenix, Ariz.
Creighton, John Hayes	Phoenix, Ariz.
Creighton, Ruth	Phoenix, Ariz.
Crider, Homer Harris	Fillmore
Cumberland, Roger Craig	Lordsburg
Daniels, Guy Albert	Azusa
Davidson, Margaret Grace	Los Angeles
Davidson, Margaret Hampton	Pasadena
Davidson, Park	Pasadena
Deacon, Charlotte	Pasadena
Deems, Ralph Francis	Long Beach
Delmarter, James Ellsworth, Jr.....	Alhambra
Dodge, Arthur C.	Santa Monica
Doig, Leroy Lowry	Santa Ana
Donaldson, Melvin Smith	South Pasadena
Dorris, Robert Stayton	Phoenix, Ariz.
Drobish, Harry Everett.....	Riverside
Drost, Richard	Los Angeles
Duncan, Arthur Gibson	Los Angeles
Durfy, Margaret	Hollywood
Edwards, Mayowen	Pasadena
Egbert, Lawrence Deems	Pasadena
Eichorn, J. Clarence	Remsen, Iowa
Elder, Nancy	Santa Ana
Eldred, Delos N.	Los Angeles
Faries, Culbert William	Los Angeles
Fick, Henry Jacob	Beaumont
Fick, Samuel Leonard	Beaumont
Flippen, Florence Donner	Orange
Foote, Marjorie	Los Angeles

Foster, Sidney Francis	South Pasadena
Fowler, William Warde	South Pasadena
Fox, Willard	Camden, N. J.
Gailey, Jenne Gregg	Santa Paula
Gilchrist, George Riggle	Eagle Rock
Gilchrist, Aida	San Mateo
Gilkey, Escho Vern	Los Angeles
Goff, George	San Anselmo
Gooding, Frances	Los Angeles
Goudge, Agnes Mary	Alhambra
Gourley, Margaret Stephenson	Filer, Idaho
Graham, Winifred	Los Angeles
Gutzler, Eleanor Louise	Los Angeles
Halberg, Earle Lee	Los Angeles
Hallenbeck, Wilbur Chapman	San Diego
Harden, Donovan Franklin	Phoenix, Ariz.
Hardy, Faith	Redondo Beach
Hardy, Sophie Edwina	Santa Ana
Harkness, Laura E.	Glendale
Harris, Guy Comstock	Pasadena
Haskell, Marian Louise	Los Angeles
Hayes, Louise Brewster	Pasadena
Hayward, Max Everett	Los Angeles
Herring, Harry Lehman	Long Beach
Hettinger, Eunice Walker	Fowler
Hibbard, William Edward	Los Angeles
Hill, Amy Ruth	Pasadena
Hill, Walter Goodwin	Phoenix, Ariz.
Hills, Gerald Thatcher	Pasadena
Hockett, John Alpheus	Pasadena
Hoenshel, Howard Domer	Downey
Hoffman, Hallock Egelston	Pasadena

Holcomb, Arthur Douglas	Banning
Holden, Edward Chester	San Dimas
Hollinger, Abraham Lincoln	Pasadena
Holmes, Paul Farnum	Los Angeles
Holmes, Walter Baird	Los Angeles
Hopkins, Robert James	Turlock
Hoyt, Mary Celeste	Pacific Grove
Huddleson, Hugh Archible	Lemoore
Hudson, Mary Alice	Fowler
Hunter, Elizabeth Jean	Fresno
Hurlburt, Agnes	Los Angeles
Hurlburt, Paul Frederick	Los Angeles
Iredell, Harry H.	Long Beach
Irving, Louis John	Los Angeles
Jackson, Lucile Margaret	Los Angeles
Jaeger, Edmund	Pasadena
Jillson, Bessie Edith	Stuart, Nebraska
Jillson, Lewis Corliss	Stuart, Nebraska
Jillson, Mary Alta	Stuart, Nebraska
Johnson, Charles Sales	Azusa
Jones, Fred P.	Huntington Park
Jones, William Walter	San Bernardino
Keffer, LeVerne	San Luis Obispo
Kellogg, Ralph Emerson	Pasadena
Kelsey, Harry Edward	Richmond, Kansas
Kemper, Helen Elizabeth	Los Angeles
Kemper, Simeon Vandeventer	Los Angeles
Kent, Evelyn May	Glendale
Key, William Amos	Fullerton
King, James Graham	Long Beach
Kinney, Ernestine Adele	Los Angeles
Kirkpatrick, Paul Harmon	Los Angeles

Knowlton, Gladys Julia	Pasadena
Kohler, Carlos Chester	San Diego
Krug, Ray Charles	Los Angeles
LaMott, Willis Church	Los Angeles
Lane, Mrs. Hazel	Eagle Rock
LaPorte, Otho Paul Daniel	Eagle Rock
Larter, Florence Hazel	Huntington Beach
Law, James A.	Merced
Lawrence, Louise Blanche	Pasadena
Lawson, Theodore Carey	Dehra Dun, India
Lee, Olive Elsie	Pasadena
Lehigh, Lawrence R.	Los Angeles
Lenz, Harry Burean	Long Beach
Littleton, Covington Henry Scott	Pasadena
Lupher, James Morgan	Long Beach
Mace, Helen Elizabeth	Azusa, Cal.
MacDonald, Hilda	South Pasadena
MacDonald, Henry MacKenzie	Pasadena
MacIntosh, Donald Harold	Los Angeles
MacIntosh, Samuel Chester	Los Angeles
Manning, Ruth	South Pasadena
Mathews, Philip Strong	Pasadena
May, Archibald Robert	Pasadena
McAllister, Wallace Daniel	Republic, Missouri
McAuley, Robert	Anaheim
McBurney, Theodore Chester	Los Angeles
McClung, Samuel Hudson	Long Beach
McCoy, Donald Drummond	Beaumont
McDermont, Earl Alexander	Long Beach
McDonald, Annie Laurie	Los Angeles
McDonald, Ruth A.	Los Angeles
McKellar, Daniel H.	Downey

McKelvey, Katherine Finley	Los Angeles
McKelvey, Helena Theresa	Los Angeles
McLain, Frederick French	Pasadena
McNair, Robert Leslie	Warren, Ohio
McNinch, Rachel Buckley	Fowler
McNutt, Henry Alexander	Glendale
McNutt, Jean Cox	Glendale
McOmber, Margaret Estelle	Glendale
Mertz, Frederick	Lafayette, Ind.
Mier, Millard Moreland	Los Angeles
Millar, Margaret Vardy	Pacific Beach
Millar, Peter Amermann	Pacific Beach
Miller, Edwin Louis	Anaheim
Miller, Grace Amelie	Pasadena
Miller, Nell Adelia	Los Angeles
Mitchell, Albert Knell	Albert, N. M.
Mitchell, Barbara Isabella	Glendale
Mitchell, Edith Augusta	Albert, N. M.
Montijo, Efren	Los Angeles
Moore, Samuel F.	Los Angeles
Moote, Florence Margaret	Los Angeles
Morsey, Thomas Marshall	Los Angeles
Morrison, Clarence W.	Perris
Morrison, Eugene Stuart	Beaumont
Mount, Lucile	San Dimas
Mundt, Madeline Harvey	Alhambra
Myers, Helen Williams	Los Angeles
Nelson, Alfred Clifford	Hyde Park
Northcross, Lucy	Orange
Norton, Claude B.	Glendale
Odell, Morgan Samuel	Pasadena
Ohl, Thomas Armor	Long Beach

Olewiler, Claude Eber	Rialto
Parker, Warner Force	Beverly Hills
Parsons, Helen May	Los Angeles
Peter, George T.	Phoenix, Ariz.
Pettit, Hermon DeWitt	Parlier
Philips, Ralph A.	Phoenix, Ariz.
Phillips, Elmer LeRoy	Santa Ana
Pierce, John Paul	Glendale
Pierce, Ruth	Glendale
Porter, Hannah Fern	Glendale
Porter, Horace Melvin	Fullerton
Price, Anna May	Los Angeles
Prichard, Paul	Los Angeles
Prichard, Samuel VanOrden	Los Angeles
Rapp, Robin	Ventura
Reider, Francis D.	Long Beach
Rich, Viola Olive	Red Bluff
Riley, Sallie Clark	Los Angeles
Roberts, Helen	Santa Ana
Robertson, Muriel Louisa	Pasadena
Robinson, William Elbert	Des Moines, Iowa
Rogers, Irene Ruth	Azusa
Rogers, Marguerite Ada	Azusa
Rogers, Ruth Miriam	Los Angeles
Rowley, Burton Hollis	Santa Ana
Russell, Elizabeth	Kansas City, Mo.
Rutherford, Margaret	Hollywood
Rutherford, Mary Eleanor	Hollywood
Rutherford, Mildred	Hollywood
Sanborne, Annie Ruth	Oakland
Sanborne, Dorothy E.	Oakland
Schaer, Mildred	Alhambra

Schoeneman, Virgil Gilbert	Long Beach
Schwarzé, Helena Theresa	Glendale
Sharp, Mabel Leonora	Long Beach
Shepard, Robert Edward	Los Angeles
Shepherd, Vera May	Los Angeles
Shipkey, Arthur H.	Orange
Shutt, Harold Philip	Pasadena
Sias, Richard Dean	Corona
Smalley, Richard Denney	Pasadena
Smart, Carson Morris	Santa Ana
Smiley, Donald Scott	Santa Ana
Smiley, Kenneth	Santa Ana
Smith, Clinton Bombaugh	San Diego
Smith, Robert Carson	Santa Ana
Smith, Ruth	South Pasadena
Smith, Sarah	Hermon
Smith, Stewart Smiley	Santa Ana
Spencer, John Chester	Anaheim
Sprinkle, Melson Rudge	Glendale
Squires, Loyd	Downey
Starr, Raymond Claude	Long Beach
Stearns, Francis Ardell	Los Angeles
Stearns, Theodore LeGrande	Los Angeles
Steelhead, Albert Francis	Inglewood
Stellar, Woodley	Hollywood
Sweatt, Lucius Allen	Redondo Beach
Tappan, Margaret	Los Angeles
Taylor, Ethel Laura	Santa Ana
Temple, James Blair	Los Angeles
Thomas, James Russell	Los Angeles
Thome, Lawrence Glendening ...	Springville, Utah
Thompson, Myrtle Elizabeth.....	Orange

Thompson, Genevera	Pasadena
Thomson, Mae	Los Angeles
Thomson, Samuel Harrison	Los Angeles
Thorne, Frederick Rowe	Los Angeles
Tidball, Charles Taylor	Santa Ana
Tidball, Eva Lillian	Santa Ana
Townsend, William Cameron	Clearwater, Cal.
Tripp, Linn A.	Los Angeles
Truelson, Irene Lavinia	Hemet
Truelson, Mamie Louise	Hemet
Tullis, Olive C.	Santa Monica
Tyree, Walter Overall	La Jolla
Urquhart, Jean Graham	Riverside, Cal.
Wagner, Herbert Edward	Orange, Cal.
Walker, Lillian Estelle	Santa Ana
Walker, Elizabeth Sterling	Long Beach
Walker, Mary Linn	Long Beach
Walker, Ray Dean	Long Beach
Walker, Rosamond	Los Angeles
Wallace, Ruby	Pasadena
Warren, William Harold	Santa Ana
Webster, Lyall D.	Santa Paula
Weinschenk, Helen Fay	Huntington Beach
Wells, Clarence Amos	Pasadena
West, Margaret	South Pasadena
Westerfield, William Johnston	Banning
Westerfield, John Williamson	Coachella
White, Elizabeth Miriam	Los Angeles
Whitmer, Nellie	Los Angeles
Wilkinson, Albert Webber	Los Angeles
Wilson, Edna Irene	Los Angeles
Wilson, Gertrude	Glendale

Wilson, Jean Hazel	Los Angeles
Wing, Harold Evan	Los Angeles
Wohlford, Burnett Coleman	Escondido
Wride, Adelaide	South Pasadena
Wylie, Emma Grace	Los Angeles
Wyngaarden, Martin	Holland, Mich.
Young, Gay	Clearwater
Young, John Park	Los Angeles
Young, Walter Stewart	Los Angeles

Enrollment by Classes

	Men	Women	Total
Freshmen	91	42	133
Sophomores	56	38	94
Juniors	26	21	47
Seniors	20	18	38
Special	7	3	10
	200	122	322

Enrollment by States

	Fresh.	Soph.	Jun.	Sen.	Sp.	Total
California	119	90	39	35	6	289
Arizona	6	1	3			10
Missouri	1	2	1			4
Iowa			1	1	1	3
Kansas				1	2	3
Nebraska	2		1			3
Indiana			2			2
Idaho		1				1
India	1					1
Michigan				1		1
Minnesota	1					1
New Jersey ...					1	1
Ohio	1					1
Pennsylvania ..	1					1
Utah	1					1
	133	94	47	38	10	322

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Address all mail:
Occidental College
Los Angeles



UNIVERSITY OF ILLINOIS-URBANA



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